



## March Revision for junior (6)

Choose the correct answer: (Algebra)

1)  $|-5| = \dots\dots$

- a)  $-5$                       b)  $5$                       c)  $10$                       d)  $0$

2)  $\frac{15}{5} \dots\dots\dots Z$

- a)  $\in$                       b)  $\notin$                       c)  $\subset$                       d)  $\not\subset$

3) If  $|X| = 4$ , then  $X = \dots\dots$  or  $\dots\dots$

- a)  $5, -5$                       b)  $4, -4$                       c)  $3, -3$                       d)  $7, -7$

4)  $Z = Z^+ \cup \dots \cup \dots$

- a)  $Z^-, \{0\}$                       b)  $Z^+, \{0\}$                       c)  $\{0\}, N$                       d)  $N, \{0\}$

5)  $3 + |-3| = \dots\dots\dots$

- a)  $0$                       b)  $6$                       c)  $3$                       d)  $-3$

6)  $Z^+ - Z^- = \dots\dots\dots$

- a)  $Z^-$                       b)  $\emptyset$                       c)  $N$                       d)  $Z^+$

7)  $Z^+ - N = \dots\dots\dots$

- a)  $Z^-$                       b)  $\emptyset$                       c)  $N$                       d)  $Z^+$

8)  $2 \dots\dots\dots Z$

- a)  $\in$                       b)  $\notin$                       c)  $\subset$                       d)  $\not\subset$

9)  $Z - Z^- = \dots\dots$

- a)  $Z^-$                       b)  $\{0\} \cup Z^-$                       c)  $N$                       d)  $\{0\} \cup Z^+$

10)  $\left| \frac{5-8}{3} \right| = \dots\dots$

- a) 1                      b) 6                      c) -6                      d) -2

11)  $Z^- \cap Z^+ = \dots\dots$

- a)  $Z^-$                       b)  $\emptyset$                       c)  $N$                       d)  $Z^+$

12) The number of integers between -1, 1 is .....

- a) 0                      b) 1                      c) 3                      d) 2

13)  $Z^+ \cup \{0\} = \dots\dots$

- a)  $Z^-$                       b)  $\emptyset$                       c)  $N$                       d)  $Z^+$

14) The greatest negative integer is .....

- a) 0                      b) 1                      c) -1                      d) Otherwise

15) The smallest positive integer is

- a) 0                      b) 1                      c) -1                      d) Otherwise

16) The additive identity of integer is .....

- a) 0                      b) 1                      c) 2                      d) 3

17)  $6 + (-10) = \dots\dots$

- a) 4                      b) 8                      c) -8                      d) -4



18)  $(-7) + 3 > \dots$

- a)  $-5$                       b)  $-4$                       c)  $2$                       d)  $0$

19) The additive neutral of integer .....

- a)  $0$                       b)  $1$                       c)  $2$                       d)  $3$

20) The additive inverse of  $(-5)$  is .....

- a)  $5$                       b)  $-5$                       c)  $7$                       d)  $9$

21) The additive inverse of  $(7)$  is .....

- e)  $5$                       f)  $-3$                       g)  $-7$                       h)  $7$

22) The value of expression:  $(-5) \times (7 + (-5))$

- a)  $-2$                       b)  $-10$                       c)  $2$                       d)  $10$

23)  $6 + (-6) = \dots$

- a)  $0$                       b)  $1$                       c)  $6$                       d)  $12$

24) The additive inverse of  $0$  is .....

- a)  $-2$                       b)  $1$                       c)  $-6$                       d)  $0$

25)  $2 \times (-8) = \dots$

- a)  $18$                       b)  $16$                       c)  $-16$                       d)  $10$

26)  $(-5) \times (-6) = \dots$

- a)  $19$                       b)  $30$                       c)  $-30$                       d)  $11$

27)  $-32 \div (-8) = \dots$

- a)  $4$                       b)  $-4$                       c)  $40$                       d)  $-24$





28)  $24 \div (-4) = \dots\dots\dots$

- a) -2                      b) -3                      c) -4                      d) -6

29)  $|-9| - 11 = \dots\dots\dots$

- a) 12                      b) -2                      c) 8                      d) -12

30)  $(-4) \times 9 = \dots\dots\dots$

- a) 12                      b) -36                      c) -12                      d) 36

31) The image of ( 5, 1 ) by transformation (  $x-1, y+2$  )

- a) ( 4, 3 )                      b) ( 3, 4 )                      c) ( 2, 5 )                      d) ( 1, 6 )

32) The image of ( 3, 1 ) by transformation (  $x+1, y+2$  )

- a) ( 3, 2 )                      b) ( 4, 3 )                      c) ( 5, 3 )                      d) ( 3, 1 )

33) The image of ( 3, -3 ) by transformation (  $-1, -2$  )

- a) ( 3, 2 )                      b) ( 4, 3 )                      c) ( 5, 3 )                      d) ( 3, 1 )

34) The image of ( 2, 1 ) by transformation (  $-1, -2$  )

- a) ( 4, 2 )                      b) ( 3, 1 )                      c) ( 2, 0 )                      d) ( 1, -1 )

35) The image of ( 5, 1 ) by transformation (  $-1, 2$  )

- a) ( 4, 3 )                      b) ( 3, 4 )                      c) ( 2, 5 )                      d) ( 1, 6 )





36) If  $A(-2, 2)$  and  $B(-5, 2)$  Then  $AB = \dots\dots\dots$  length unit

- a) 1                      b) 2                      c) 3                      d) 4

37) If  $A(0, 1)$  and  $B(0, 5)$  Then  $AB = \dots\dots\dots$  length unit

- a) 1                      b) 2                      c) 3                      d) 4

38) If  $A(-2, 2)$  and  $B(-3, 2)$  Then  $AB = \dots\dots\dots$  length unit

- a) 1                      b) 2                      c) 3                      d) 4

39) If  $A(0, 6)$  and  $B(0, 8)$  Then  $AB = \dots\dots\dots$  length unit

- a) 1                      b) 2                      c) 3                      d) 4

40) The image of  $(-3, -2)$  by transformation  $(x-1, y-2)$

- a)  $(-3, 3)$               b)  $(-4, 4)$               c)  $(-5, -5)$               d)  $(-6, -6)$

41) The image of  $(2, 0)$  by transformation  $(x+1, y+2)$

- a)  $(3, 2)$               b)  $(4, 3)$               c)  $(5, 4)$               d)  $(3, 4)$

42) The image of  $(-4, -3)$  by transformation  $(-1, -2)$

- a)  $(-1, -3)$               b)  $(-4, -4)$               c)  $(-5, -5)$               d)  $(-3, -1)$



- 43) The image of  $(4, 2)$  by transformation  $(x+1, y+2)$   
a)  $(3, 2)$       b)  $(4, 3)$       c)  $(5, 4)$       d)  $(6, 4)$
- 44) The image of  $(2, 4)$  by transformation  $(-1, 2)$   
a)  $(4, 3)$       b)  $(3, 4)$       c)  $(2, 5)$       d)  $(1, 6)$
- 45) The image of  $(3, 2)$  by transformation  $(-1, -2)$   
a)  $(4, 2)$       b)  $(3, 1)$       c)  $(2, 0)$       d)  $(1, -1)$

March Revision for junior (6)Choose the correct answer: (Algebra)

1)  $|-5| = \dots\dots$

a)  $-5$

b)  $5$

c)  $10$

d)  $0$

2)  $\left(\frac{15}{5}\right)^3 \dots\dots \in \mathbb{Z}$

a)  $\in$

b)  $\notin$

c)  $\subset$

d)  $\not\subset$

3) If  $|X| = 4$ , then  $X = \dots\dots$  or  $\dots\dots$

a)  $5, -5$

b)  $4, -4$

c)  $3, -3$

d)  $7, -7$

4)  $\mathbb{Z} = \mathbb{Z}^+ \cup \dots\dots \cup \dots\dots$

a)  $\mathbb{Z}^-, \{0\}$

b)  $\mathbb{Z}^+, \{0\}$

c)  $\{0\}, \mathbb{N}$

d)  $\mathbb{N}, \{0\}$

5)  $3 + |-3| = \dots\dots$

a)  $0$

b)  $6$

c)  $3$

d)  $-3$

6)  $\mathbb{Z}^+ - \mathbb{Z}^- = \dots\dots$

a)  $\mathbb{Z}^-$

b)  $\emptyset$

c)  $\mathbb{N}$

d)  $\mathbb{Z}^+$

7)  $\mathbb{Z}^+ - \mathbb{N} = \dots\dots$

a)  $\mathbb{Z}^-$

b)  $\emptyset$

c)  $\mathbb{N}$

d)  $\mathbb{Z}^+$

8)  $2 \dots\dots \mathbb{Z}$

a)  $\in$

b)  $\notin$

c)  $\subset$

d)  $\not\subset$



9)  $Z - Z^- = \dots\dots$

a)  $Z^-$

b)  $\{0\} \cup Z^-$

c)  $N$

d)  $\{0\} \cup Z^+$

10)  $\left| \frac{5-8}{3} \right| = \left| \frac{-3}{3} \right| = |-1| = 1$

a) 1

b) 6

c) -6

d) -2

11)  $Z^- \cap Z^+ = \dots\dots$

a)  $Z^-$

b)  $\emptyset$

c)  $N$

d)  $Z^+$

12) The number of integers between -1, 1 is .....

a) 0

b) 1

c) 3

d) 2

13)  $Z^+ \cup \{0\} = \dots\dots$

a)  $Z^-$

b)  $\emptyset$

c)  $N$

d)  $Z^+$

14) The greatest negative integer is .....

a) 0

b) 1

c) -1

d) Otherwise

15) The smallest positive integer is

a) 0

b) 1

c) -1

d) Otherwise

16) The additive identity of integer is .....

a) 0

b) 1

c) 2

d) 3

17)  $6 + (-10) = \dots\dots$

a) 4

b) 8

c) -8

d) -4



<sup>-4</sup>  
 18)  $(-7) + 3 > \dots$

- a) -5      b) -4      c) 2      d) 0

19) The additive neutral of integer .....

- a) 0      b) 1      c) 2      d) 3

20) The additive inverse of (-5) is ..... *additive inverse  $\rightarrow$  change sign*

- a) 5      b) -5      c) 7      d) 9
- (+)  $\rightarrow$  (-)  
 (-)  $\rightarrow$  (+)*

21) The additive inverse of (7) is .....

- e) 5      f) -3      g) -7      h) 7

22) The value of expression:  $(-5) \times (7 + (-5))$

- a) -2      b) -10      c) 2      d) 10

23)  $6 + (-6) = \dots$

- a) 0      b) 1      c) 6      d) 12

24) The additive inverse of 0 is .....

- a) -2      b) 1      c) -6      d) 0

25)  $2 \times (-8) = \dots$

- a) 18      b) 16      c) -16      d) 10

26)  $(-5) \times (-6) = \dots$

- a) 19      b) 30      c) -30      d) 11

27)  $-32 \div (-8) = \dots$

- a) 4      b) -4      c) 40      d) -24

note

$(+) \times (+) \rightarrow (+)$

$(-) \times (-) \rightarrow (+)$

$(+) \times (-) \rightarrow (-)$

$(-) \times (+) \rightarrow (-)$

Same sign (+)

diff sign (-ve)

28)  $24 \div (-4) = \dots\dots\dots$

a)  $-2$

b)  $-3$

c)  $-4$

d)  $-6$

29)  $|-9| - 11 = \dots\dots\dots$

a)  $12$

b)  $-2$

c)  $8$

d)  $-12$

30)  $(-4) \times 9 = \dots\dots\dots$

a)  $12$

b)  $-36$

c)  $-12$

d)  $36$

31) The image of  $(5, 1)$  by transformation  $(x-1, y+2)$

a)  $(4, 3)$

b)  $(3, 4)$

c)  $(2, 5)$

d)  $(1, 6)$

32) The image of  $(3, 1)$  by transformation  $(x+1, y+2)$

a)  $(3, 2)$

b)  $(4, 3)$

c)  $(5, 3)$

d)  $(3, 1)$

33) The image of  $(3, -3)$  by transformation  $(-1, -2)$

a)  $(2, -5)$

b)  $(4, 3)$

c)  $(5, 3)$

d)  $(3, 1)$

34) The image of  $(2, 1)$  by transformation  $(-1, -2)$

a)  $(4, 2)$

b)  $(3, 1)$

c)  $(2, 0)$

d)  $(1, -1)$

35) The image of  $(5, 1)$  by transformation  $(-1, 2)$

a)  $(4, 3)$

b)  $(3, 4)$

c)  $(2, 5)$

d)  $(1, 6)$





- 36) If A(-2, 2) and B(-5, 2) Then  $AB = \dots\dots\dots$  length unit  $AB = |B - A|$   
 $AB = |-5 - (-2)|$   
 $AB = 3 \text{ unit}$   
 a) 1                      b) 2                      **c) 3**                      d) 4
- 37) If A(0, 1) and B(0, 5) Then  $AB = \dots\dots\dots$  length unit  $AB = |5 - 1| = 4$   
 a) 1                      b) 2                      c) 3                      **d) 4**
- 38) If A(-2, 2) and B(-3, 2) Then  $AB = \dots\dots\dots$  length unit  $AB = |-3 - (-2)|$   
 $= 1$   
**a) 1**                      b) 2                      c) 3                      d) 4
- 39) If A(0, 6) and B(0, 8) Then  $AB = \dots\dots\dots$  length unit  $= |8 - 6|$   
 $= 2$   
 a) 1                      **b) 2**                      c) 3                      d) 4
- 40) The image of (-3, -2) by transformation ( $\overset{-3}{x}-1, \overset{-2}{y}-2$ )  
 $(-4, -4)$   
 a) (-3, 3)                      **b) (-4, -4)**                      c) (-5, -5)                      d) (-6, -6)
- 41) The image of (2, 0) by transformation ( $\overset{2}{x}+1, \overset{0}{y}+2$ )  
 $(3, 2)$   
**a) (3, 2)**                      b) (4, 3)                      c) (5, 4)                      d) (3, 4)
- 42) The image of (-4, -3) by transformation (-1, -2)  
 $(-4-1, -3-2)$   
 $-5, -5$   
 a) (-1, -3)                      b) (-4, -4)                      **c) (-5, -5)**                      d) (-3, -1)



43) The image of  $(4, 2)$  by transformation  $(x+1, y+2)$

a)  $(3, 2)$

b)  $(4, 3)$

c)  $(5, 4)$

d)  $(6, 4)$

44) The image of  $(2, 4)$  by transformation  $(-1, 2)$

a)  $(4, 3)$

b)  $(3, 4)$

c)  $(2, 5)$

d)  $(1, 6)$

45) The image of  $(3, 2)$  by transformation  $(-1, -2)$

a)  $(4, 2)$

b)  $(3, 1)$

c)  $(2, 0)$

d)  $(1, -1)$

$(3-1, 2-2)$   
 $(2, 0)$

Thank you

Mr. Morad Ashraf

**Choose the correct answer:**

1)  $Z = Z^+ \cup \dots \cup \dots$

- a.  $N$                       b.  $Z^-$                       c.  $Z^- \cup \{0\}$

2)  $Z - Z^- = \dots$

- a.  $N$                       b.  $Z^+$                       c.  $Z^-$

3)  $Z - N = \dots$

- a.  $Z^+$                       b.  $Z^-$                       c.  $\{0\}$

4)  $N - Z = \dots$

- a.  $Z^-$                       b.  $Z^+$                       c.  $\emptyset$

5)  $N - C = \dots$

- a.  $C$                       b.  $\{0\}$                       c.  $N$

6)  $Z - Z^- = \dots$

- a.  $N$                       b.  $Z^+ \cup \{0\}$                       c.  $Z^-$

7)  $Z \cap Z^- = \dots$

- a.  $Z^-$                       b.  $Z^+$                       c.  $Z$

8)  $Z \cap Z^+ = \dots$

- a.  $Z$                       b.  $Z^+$                       c.  $Z^-$

9)  $Z \cap N = \dots$

- a.  $Z$                       b.  $N$                       c.  $Z^-$

10)  $Z \cap E = \dots$

- a.  $Z$                       b.  $0$                       c.  $E$





11)  $\mathbb{Z} \cap \mathbb{O} = \dots\dots\dots$

a.  $\mathbb{Z}$

b.  $\mathbb{O}$

c.  $\mathbb{E}$

12)  $\mathbb{Z} \cup \mathbb{Z}^+ = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

13)  $\mathbb{Z} \cup \mathbb{Z}^- = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

14)  $\mathbb{Z} \cup \mathbb{N} = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{N}$

c.  $\mathbb{Z}$

15)  $\mathbb{Z} - \mathbb{Z}^+ = \dots\dots\dots$

a.  $\mathbb{Z}^- \cup \{0\}$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

16)  $\mathbb{Z}^- - \mathbb{Z}^+ = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

17)  $\mathbb{Z}^+ - \mathbb{Z}^- = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

18)  $\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\emptyset$

19)  $\mathbb{Z}^+ \cup \{0\} = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{N}$

c.  $\mathbb{Z}$

20)  $\mathbb{Z}^+ \cup \{0\} \cup \mathbb{Z}^- = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{Z}^+$

c.  $\mathbb{Z}$

21)  $\mathbb{Z}^- \cap \mathbb{N} = \dots\dots\dots$

a.  $\mathbb{Z}^-$

b.  $\mathbb{N}$

c.  $\emptyset$



22) 7.35 ..... Z

a. €

b. C

c. ∅

23) {8, 6.3} ..... Z

a. C

b. €

c. ∅

24)  $\frac{3}{4}$  ..... Z

a. €

b. C

c. ∅

25)  $\frac{15}{3}$  ..... Z

a. €

b. C

c. ∅

26)  $\left\{ \frac{8-5}{9-4} \right\}$  ..... Z

a. C

b. €

c. ∅

27)  $|-7|$  ..... Z

a. €

b. C

c. ∅

28)  $-|-9|$  ..... Z

a. €

b. C

c. ∅

29)  $\left| \frac{7-3}{4-2} \right|$  ..... Z

a. €

b. C

c. ∅

30)  $X \subset \{2, -3\} \cap \{5, -3\}$ , then  $X =$  .....

a. {2}

b. {-3}

c. {5}

31) Sea level represented by the number .....

a. 0

b. 1

c. -1



32) Moving to right is represented by .....number

- a. negative                      b. 0                      c. positive

33) Moving backward is represented by .....number

- a. negative                      b. positive                      c. 0

34)  $|X| = 8$ , then value of  $X = \dots\dots$

- a. 8                      b. - 8                      c. 8 or -8

35)  $|-12| = X$ , then value of  $X = \dots\dots$

- a. 12                      b. -12                      c. 12 or - 12

36) The complement of  $Z^-$  with respect to  $Z = \dots\dots$

- a.  $Z^-$                       b.  $N$                       c.  $Z^+$

37) The complement of  $Z^+$  with respect to  $N = \dots\dots$

- a.  $Z^-$                       b.  $\{0\}$                       c.  $Z^+$

38) The smallest positive integer is .....

- a. 2                      b. 0                      c. 1

39) The greatest negative integer is .....

- a. - 2                      b. 0                      c. - 1

40) The number neither positive nor negative is .....

- a. 1                      b. 0                      c. - 1

41) The set of integers between -3 and 2 is

- a.  $\{-3, 2\}$                       b.  $\{-2, -1, 0, 1\}$                       c.  $\{-3, -2, -1, 0, 1, 2\}$

42) Number of integers between -4 and 3 is

- a. 7                      b. 6                      c. 8





43)  $X = \{X: X \in \mathbb{Z}, X \leq -2\}$ ,  $X = \dots\dots\dots$

- a.  $\{-3, -4, -5\}$       b.  $\{-1, -0, 1\}$       c.  $\{-2, -3, -4, \dots\}$

44)  $X = \{X: X \in \mathbb{Z}, -3 \leq X \leq -2\}$ ,  $X = \dots\dots\dots$

- a.  $\{-3, -2\}$       b.  $\emptyset$       c.  $\{-1, 0\}$

45)  $X = \{X: X \in \mathbb{Z}, -1 \leq X \leq 1\}$ ,  $X = \dots\dots\dots$

- a.  $\emptyset$       b.  $\{1, -1, 0\}$       c.  $\{0\}$

46) The number of integers between -3 and 3 is .....

- a. 5      b. 6      c. 7

47)  $\mathbb{Z}^+ \cup \dots\dots\dots = \mathbb{N}$

- a.  $\mathbb{N}$       b.  $\mathbb{Z}^+$       c.  $\{0\}$

48) The additive inverse of (-6)

- a. 6      b. -6      c. 0

49) The additive inverse of (0)

- a. -1      b. 0      c. 1

50)  $(-7) + 3 > \dots\dots\dots$

- a. -2      b. -4      c. -5

51)  $8 + (-6) > \dots\dots\dots$

- a. 2      b. 5      c. -4

52)  $[8 + (-3)] \times (-3) = \dots\dots\dots$

- a. -15      b. 15      c. 8

53)  $|-7| + \dots\dots\dots = 0$

- a. 7      b. -7      c. 0



54)  $5 + (-5) = \dots\dots\dots$

a. 5

b. 0

c. 10

55)  $(-25) \div 5 = \dots\dots\dots$

a. 5

b. - 5

c. 0

56)  $(-56) \div (-7) = \dots\dots\dots$

a. - 8

b. 8

c. 9

57) The product of two positive numbers is .....

a. negative

b. positive

c. zero

58) The product of two negative numbers is .....

a. negative

b. positive

c. zero

59) The product of positive numbers and negative number is

a. negative

b. positive

c. zero

60) If  $X = 6$ ,  $Y = -8$ , then  $XY = \dots\dots\dots$

a. - 48

b. 48

c. 42

61) If  $X = 9$ ,  $Y = 5$ , Then  $2XY = \dots\dots\dots$

a. 45

b. - 45

c. 90

62) The additive neutral of integers is

a. 1

b. 0

c. - 1

63) The multiplicative identity of integers is

a. - 1

b. 1

c. 0





64)  $(-7) \dots\dots\dots |-7|$

a. >

b. =

c. <

65)  $(-2) \dots\dots\dots (-8)$

a. >

b. =

c. <

66)  $75 + 42 = 42 + 75$  (.....property)

a. commutative

b. associative

c. additive identity

67)  $(-76) + \dots\dots\dots = (-76)$

a. 0

b. 1

c. -1

68)  $[(-4) + 5] + 7 = (-4) + [5 + 7]$  (.....property)

a. commutative

b. associative

c. additive identity

69)  $68 + 0 = 68$  (.....property)

a. commutative

b. associative

c. additive identity

70)  $13 \times 9 = 9 \times 13$  (.....property)

a. commutative

b. associative

c. multiplicative identity

71)  $(8 \times 9) \times 6 = 8 \times (9 \times 6)$  (.....property)

a. commutative

b. associative

c. multiplicative identity

72)  $98 \times 1 = 98$  (.....property)

a. commutative

b. associative

c. multiplicative identity

73)  $89 \times 28 + 89 \times 72$  (.....property)

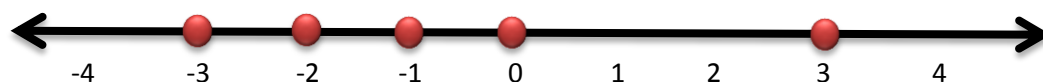
a. commutative

b. distributive

c. associative



74) The set that represent by number line is



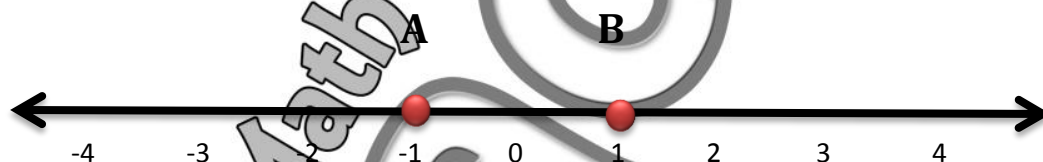
- a.  $\{0, -1, -2, -3\}$       b.  $\{3, 0, -1, -2, -3\}$       c.  $\{-4, 1, 2\}$

75) The length of EF



- a. 1      b. 7      c. -7

76) The length of AB



- a. 0      b. 1      c. 2

77) R

R

The type of geometric transformation

- a. reflection      b. translation      c. rotation

78) F

F

The type of geometric transformation

- a. reflection      b. translation      c. rotation



79) F H

The type of geometric transformation

a. reflection                      b. translation                      c. rotation

80) Area of parallelogram = base length  $\times$  .....

a. width                              b. high                              c. length

81) Area of rhombus = .....  $\times d_1 \times d_2$

a.  $\frac{1}{3}$                               b.  $\frac{1}{2}$                               c.  $\frac{1}{4}$

82) Area rectangle = length  $\times$  .....

a. base                              b. width                              c. high

83) Area square = side length  $\times$  .....

a. side                              b. base                              c. width

84) Area square =  $\frac{1}{2} \times$  .....  $\times d$

a. diagonal                      b. width                              c. high

85) The image of the point (3, -2) by translation (-3, 2)

a. (0, 0)                              b. (2, 0)                              c. (3, 0)

86) The image of the point A (3, -4) by translation (X + 1, y + 4) is .....

a. (4, 0)                              b. (4, -4)                              c. (3, 0)

87) The image of the point (-1, 2) by translation of magnitude of 3 unit in the positive direction of the x-axis

a. (-1, 5)                              b. (2, 2)                              c. (-2, 2)





88) The image of the point  $(-3, 4)$  by translation of magnitude of 4 unit in the positive direction of the y-axis

- a.  $(-7, 4)$                       b.  $(1, 8)$                       c.  $(-3, 8)$

89) If  $\bar{A}(3, -3)$  is the image of A by translation  $(x - 1, y - 4)$  then the point A is

- a.  $(2, -7)$                       b.  $(4, 1)$                       c.  $(2, 1)$

90) If A  $(-2, 2)$  and B  $(-5, 2)$ , then  $AB = \dots\dots$  length unit

- a. 1                                  b. 3                                  c. 2

91) If A  $(0, 1)$  and B  $(0, 3)$ , then  $AB = \dots\dots$  length unit

- a. 1                                  b. 3                                  c. 2

92) The image of  $(-4, -3)$  by translation  $(x - 1, y - 2)$  is

- a.  $(-5, -5)$                       b.  $(-3, -3)$                       c.  $(3, 1)$

93) If  $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then  $a = \dots\dots$

- a. 2                                  b. -3                                  c. 5

94)  $(|-9| + 3) \div 2 \dots\dots Z$

- a.  $\in$                                   b. C                                  c.  $\notin$

95) If  $x + 3 = |-7|$ , then  $x = \dots\dots$

- a. 10                                  b. 4                                  c. -4

96) If A  $(2, 9)$ , B  $(-4, 9)$ , then the length of  $AB = \dots\dots$

- a. 7                                  b. 6                                  c. 5



97) The image of the point  $(-1, 2)$  by translation of 3 units in the negative direction of the x-axis is

- a.  $(-4, 2)$                       b.  $(2, 2)$                       c.  $(-1, 5)$

98) The image of the point  $(-3, 4)$  by translation  $(0, -4)$

- a.  $(0, 0)$                       b.  $(-3, 0)$                       c.  $(-3, -4)$

99) If  $a < b$ , then  $-3a$  .....  $-3b$

- a.  $>$                       b.  $=$                       c.  $<$

100) If  $x = |-3|$ ,  $y = -2$ , then  $2xy =$  .....

- a. 6                      b. -6                      c. -12

101)  $14 + 213 + (-14) =$  .....

- a. 213                      b. 0                      c. 14

102) If  $x(3, 8)$ ,  $y(3, 4)$ , then the length of  $xy =$  .....

- a. 7                      b. 11                      c. 4

103)  $Z^+ - Z^- = N -$  .....

- a.  $Z^+$                       b.  $\{0\}$                       c.  $Z$

104) the smallest non negative integer is .....

- a. 0                      b. 1                      c. -1

105) If  $x = |-12|$ ,  $y = -3$ , then  $x \div y =$  .....

- a. 4                      b. -4                      c. 15

106) the previous integer of  $(-9)$  is .....

- a. -10                      b. -8                      c. -7

107) the image of the point  $(3, 5)$  by translation  $(x + 2, y - 1)$

- a.  $(5, 6)$                       b.  $(5, 4)$                       c.  $(1, 4)$





Choose the correct answer:

1)  $Z = Z^+ \cup \dots \cup \dots$

a.  $N$

b.  $Z^-$

c.  $Z^- \cup \{0\}$

2)  $Z - Z^- = \dots$

a.  $N$

b.  $Z^+$

c.  $Z^-$

3)  $Z - N = \dots$

a.  $Z^+$

b.  $Z^-$

c.  $\{0\}$

4)  $N - Z = \dots$

a.  $Z^-$

b.  $Z^+$

c.  $\emptyset$

5)  $N - C = \dots$

a.  $C$

b.  $\{0\}$

c.  $N$

6)  $Z - Z^- = \dots$

a.  $N$

b.  $Z^+ \cup \{0\}$

c.  $Z^-$

7)  $Z \cap Z^- = \dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

8)  $Z \cap Z^+ = \dots$

a.  $Z$

b.  $Z^+$

c.  $Z^-$

9)  $Z \cap N = \dots$

a.  $Z$

b.  $N$

c.  $Z^-$

10)  $Z \cap E = \dots$

a.  $Z$

b.  $0$

c.  $E$



11)  $Z \cap O = \dots\dots\dots$

a.  $Z$

b.  $O$

c.  $E$

12)  $Z \cup Z^+ = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

13)  $Z \cup Z^- = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

14)  $Z \cup N = \dots\dots\dots$

a.  $Z^-$

b.  $N$

c.  $Z$

15)  $Z - Z^+ = \dots\dots\dots$

a.  $Z^- \cup \{0\}$

b.  $Z^+$

c.  $Z$

16)  $Z^- - Z^+ = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

17)  $Z^+ - Z^- = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

18)  $Z^+ \cap Z^- = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $\emptyset$

19)  $Z^+ \cup \{0\} = \dots\dots\dots$

a.  $Z^-$

b.  $N$

c.  $Z$

20)  $Z^+ \cup \{0\} \cup Z^- = \dots\dots\dots$

a.  $Z^-$

b.  $Z^+$

c.  $Z$

21)  $Z^- \cap N = \dots\dots\dots$

a.  $Z^-$

b.  $N$

c.  $\emptyset$



22) 7.35 ..... Z

a. €

b. C

c. ₤

23) {8, 6.3} ..... Z

a. C

b. €

c. ₤

24)  $\frac{3}{4}$  ..... Z

a. €

b. C

c. ₤

25)  $\frac{15}{3}$  ..... Z

a. €

b. C

c. ₤

26)  $\left\{ \frac{8-5}{9-4} \right\}$  ..... Z

a. C

b. €

c. ₤

27)  $|-7|$  ..... Z

a. €

b. C

c. ₤

28)  $-|-9|$  ..... Z

a. €

b. C

c. ₤

29)  $\left| \frac{7-3}{4-2} \right|$  ..... Z

a. €

b. C

c. ₤

30)  $X \subset \{2, -3\} \cap \{5, -3\}$ , then  $X =$  .....

a. {2}

b. {-3}

c. {5}

31) Sea level represented by the number .....

a. 0

b. 1

c. -1



32) Moving to right is represented by .....number

- a. negative                      b. 0                      **c. positive**

33) Moving backward is represented by .....number

- a. negative**                      b. positive                      c. 0

34)  $|X| = 8$ , then value of  $X =$  .....

- a. 8                      b. - 8                      **c. 8 or -8**

35)  $|-12| = X$ , then value of  $X =$  .....

- a. 12**                      b. - 12                      c. 12 or - 12

36) The complement of  $Z^-$  with respect to  $Z =$  .....

- a.  $Z^-$                       **b.  $N$**                       c.  $Z^+$

37) The complement of  $Z^+$  with respect to  $N =$  .....

- a.  $Z^-$                       **b.  $\{0\}$**                       c.  $Z^+$

38) The smallest positive integer is .....

- a. 2**                      b. 0                      c. 1

39) The greatest negative integer is .....

- a. - 2                      b. 0                      **c. - 1**

40) The number neither positive nor negative is .....

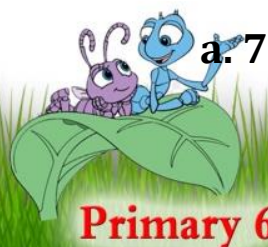
- a. 1                      **b. 0**                      c. - 1

41) The set of integers between -3 and 2 is

- a.  $\{-3, 2\}$                       **b.  $\{-2, -1, 0, 1\}$**                       c.  $\{-3, -2, -1, 0, 1, 2\}$

42) Number of integers between -4 and 3 is

- a. 7                      **b. 6**                      c. 8





43)  $X = \{X: X \in \mathbb{Z}, X \leq -2\}$ ,  $X = \dots\dots\dots$

- a.  $\{-3, -4, -5\}$       b.  $\{-1, -0, 1\}$       c.  $\{-2, -3, -4, \dots\}$

44)  $X = \{X: X \in \mathbb{Z}, -3 \leq X \leq -2\}$ ,  $X = \dots\dots\dots$

- a.  $\{-3, -2\}$       b.  $\emptyset$       c.  $\{-1, 0\}$

45)  $X = \{X: X \in \mathbb{Z}, -1 \leq X \leq 1\}$ ,  $X = \dots\dots\dots$

- a.  $\emptyset$       b.  $\{1, -1, 0\}$       c.  $\{0\}$

46) The number of integers between -3 and 3 is .....

- a. 5      b. 6      c. 7

47)  $\mathbb{Z}^+ \cup \dots\dots\dots = \mathbb{N}$

- a.  $\mathbb{N}$       b.  $\mathbb{Z}^-$       c.  $\{0\}$

48) The additive inverse of (-6)

- a. 6      b. -6      c. 0

49) The additive inverses of (0)

- a. -1      b. 0      c. 1

50)  $(-7) + 3 > \dots\dots\dots$

- a. -2      b. -4      c. -5

51)  $8 + (-6) > \dots\dots\dots$

- a. 2      b. 5      c. -4

52)  $[8 + (-3)] \times (-3) = \dots\dots\dots$

- a. -15      b. 15      c. 8

53)  $|-7| + \dots\dots\dots = 0$

- a. 7      b. -7      c. 0





54)  $5 + (-5) = \dots\dots\dots$

a. 5

b. 0

c. 10

55)  $(-25) \div 5 = \dots\dots\dots$

a. 5

b. - 5

c. 0

56)  $(-56) \div (-7) = \dots\dots\dots$

a. - 8

b. 8

c. 9

57) The product of two positive numbers is .....

a. negative

b. positive

c. zero

58) The product of two negative numbers is .....

a. negative

b. positive

c. zero

59) The product of positive numbers and negative number is

a. negative

b. positive

c. zero

60) If  $X = 6$ ,  $Y = -8$ , then  $XY = \dots\dots\dots$

a. - 48

b. 48

c. 42

61) If  $X = 9$ ,  $Y = 5$ , Then  $2XY = \dots\dots\dots$

a. 45

b. - 45

c. 90

62) The additive neutral of integers is

a. 1

b. 0

c. - 1

63) The multiplicative identity of integers is

a. - 1

b. 1

c. 0



64)  $(-7) \dots\dots\dots |-7|$

**a. >**

**b. =**

**C.  $\nabla$**

65)  $(-2) \dots\dots\dots (-8)$

**a. >**

**b. =**

**C. <**

66)  $75 + 42 = 42 + 75$  (.....property)

**a. commutative**

**b. associative**

### c. additive identity

67)  $(-76) + \dots = (-76)$

**a. 0**

**b. 1**

**C. - 1**

68)  $[(-4) + 5] + 7 = (-4) + [5 + 7]$  (.....property)

**a. commutative**

**b. associative**

### c. additive identity

69)  $68 + 0 = 68$  (.....property)

### a. commutative

**b. associative**

### c. additive identity

70)  $13 \times 9 = 9 \times 13$  (.....property)

**a. commutative**

**b. associative**

### c. multiplicative identity

71)  $(8 \times 9) \times 6 = 8 \times (9 \times 6)$  (.....property)

**a. commutative**

**b. associative**

### c. multiplicative identity

72)  $98 \times 1 = 98$  (.....property)

### a. commutative

### b. associative

### c. multiplicative identity

73)  $89 \times 28 + 89 \times 72$  (.....property)

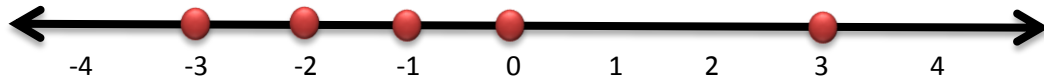
**a. commutative**

## b. distributive

**c. associative**



74) The set that represent by number line is

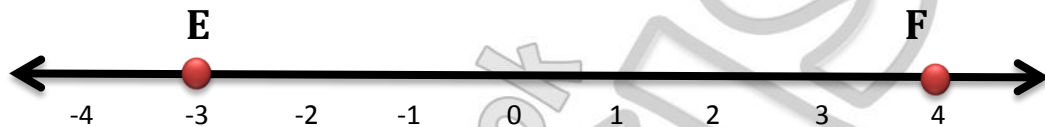


a. {0, -1, -2, -3}

b. {3, 0, -1, -2, -3}

c. {-4, 1, 2}

75) The length of EF



a. 1

b. 7

c. -7

76) The length of AB



a. 0

b. 1

c. 2

77) R

R

The type of geometric transformation

a. reflection

b. translation

c. rotation

78) F

F

The type of geometric transformation

a. reflection

b. translation

c. rotation



79) F H

The type of geometric transformation

a. reflection                      b. translation                      **c. rotation**

80) Area of parallelogram = base length  $\times$  .....

a. width                      **b. high**                      c. length

81) Area of rhombus = .....  $\times d_1 \times d_2$

a.  $\frac{1}{3}$                       **b.  $\frac{1}{2}$**                       c.  $\frac{1}{4}$

82) Area rectangle = length  $\times$  .....

a. base                      b. width                      c. high

83) Area square = side length  $\times$  .....

**a. side**                      b. base                      c. width

84) Area square =  $\frac{1}{2} \times$  .....  $\times d$

**a. diagonal**                      b. width                      c. high

85) The image of the point (3, -2) by translation (-3, 2)

**a. (0, 0)**                      b. (2, 0)                      c. (3, 0)

86) The image of the point A (3, -4) by translation (X + 1, y + 4) is .....

**a. (4, 0)**                      b. (4, -4)                      c. (3, 0)

87) The image of the point (-1, 2) by translation of magnitude of 3 unit in the positive direction of the x-axis

a. (-1, 5)                      **b. (2, 2)**                      c. (-2, 2)





88) The image of the point  $(-3, 4)$  by translation of magnitude of 4 unit in the positive direction of the y-axis

- a.  $(-7, 4)$                       b.  $(1, 8)$                       c.  $(-3, 8)$

89) If  $\bar{A}(3, -3)$  is the image of A by translation  $(x - 1, y - 4)$  then the point A is

- a.  $(2, -7)$                       b.  $(4, 1)$                       c.  $(2, 1)$

90) If A  $(-2, 2)$  and B  $(-5, 2)$ , then AB= .....length unit

- a. 1                      b. 3                      c. 2

91) If A  $(0, 1)$  and B  $(0, 3)$ , then AB= .....length unit

- a. 1                      b. 3                      c. 2

92) The image of  $(-4, -3)$  by translation  $(x-1, y-2)$  is

- a.  $(-5, -5)$                       b.  $(-3, -3)$                       c.  $(3, 1)$

93) If  $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then  $a = \dots$

- a. 2                      b. -3                      c. 5

94)  $(|-9| + 3) \div 2 \dots\dots\dots Z$

- a.  $\in$                       b. C                      c.  $\notin$

95) If  $x + 3 = |-7|$ , then  $x = \dots\dots\dots$

- a. 10                      b. 4                      c. -4

96) If A  $(2, 9)$ , B  $(-4, 9)$ , then the length of AB = .....

- a. 7                      b. 6                      c. 5





97) The image of the point  $(-1, 2)$  by translation of 3 units in the negative direction of the x-axis is

a.  $(-4, 2)$

b.  $(2, 2)$

c.  $(-1, 5)$

98) The image of the point  $(-3, 4)$  by translation  $(0, -4)$

a.  $(0, 0)$

b.  $(-3, 0)$

c.  $(-3, -4)$

99) If  $a < b$ , then  $-3a$  .....  $-3b$

a.  $>$

b.  $=$

c.  $<$

100) If  $x = |-3|$ ,  $y = -2$ , then  $2xy =$  .....

a. 6

b. -6

c. -12

101)  $14 + 213 + (-14) =$  .....

a. 213

b. 0

c. 14

102) If  $x(3, 8)$ ,  $y(3, 4)$ , then the length of  $xy =$  .....

a. 7

b. 11

c. 4

103)  $Z^+ - Z^- = N -$  .....

a.  $Z^+$

b.  $\{0\}$

c.  $Z$

104) the smallest non negative integer is .....

a. 0

b. 1

c. -1

105) If  $x = |-12|$ ,  $y = -3$ , then  $x \div y =$  .....

a. 4

b. -4

c. 15

106) the previous integer of  $(-9)$  is .....

a. -10

b. -8

c. -7

107) the image of the point  $(3, 5)$  by translation  $(x + 2, y - 1)$

a.  $(5, 6)$

b.  $(5, 4)$

c.  $(1, 4)$



## Choose the correct Answer

1.	$ -5  = \dots\dots\dots$ A) $-5$ B) $5$ C) $10$ D) $0$
2.	$\frac{15}{5} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$
3.	If $ X  = 4$ , then $X = \dots\dots\dots$ or $\dots\dots\dots$ A) $5, -5$ B) $4, -4$ C) $3, -3$ D) $7, -7$
4.	The integer included between $-5$ and $3$ is $\dots\dots\dots$ A) $4$ B) $1$ C) $-6$ D) $-7$
5.	$\mathbb{Z} = \mathbb{Z}^+ \cup \dots\dots\dots \cup \dots\dots\dots$ A) $\mathbb{Z}^-, \{0\}$ B) $\mathbb{Z}^+, \{0\}$ C) $\{0\}, \mathbb{N}$ D) $\mathbb{N}, \{0\}$
6.	$ -7  = \dots\dots\dots$ A) $-7$ B) $7$ C) $8$ D) $-8$
7.	$3 +  -3  = \dots\dots\dots$ A) $0$ B) $6$ C) $3$ D) $-3$
8.	If $ X  = 5$ , then $X = \dots\dots\dots$ or $\dots\dots\dots$ A) $5, -5$ B) $4, -4$ C) $3, -3$ D) $7, -7$
9.	$\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
10.	$ -1  = \dots\dots\dots$ A) $-1$ B) $1$ C) $10$ D) $0$
11.	$5 +  -5  = \dots\dots\dots$ A) $0$ B) $5$ C) $10$ D) $-10$
12.	$\mathbb{Z} - \mathbb{N} = \dots\dots\dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
13.	$7 +  -3  = \dots\dots\dots$ A) $2$ B) $10$ C) $4$ D) $-4$
14.	$2 \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$

15.	If $ X  = 7$ , then $X =$ ..... or ..... A) 5, -5      B) 4, -4      C) 3, -3      D) 7, -7
16.	$\mathbb{Z} - \mathbb{Z}^+ =$ ..... A) $\mathbb{Z}^-$ B) $\{0\} \cup \mathbb{Z}^-$ C) $\mathbb{N}$ D) $\{0\} \cup \mathbb{Z}^+$
17.	$ \frac{5-8}{3}  =$ ..... A) 1      B) 6      C) -6      D) -2
18.	$9 +  -2  =$ ..... A) 7      B) 11      C) 9      D) -11
19.	$5$ ..... $\mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$
20.	The number of integers between -1 and 1 is ..... A) 0      B) 1      C) 2      D) 3
21.	$\mathbb{Z}^+ \cap \mathbb{Z}^- =$ ..... A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
22.	$ \frac{3-8}{5}  =$ ..... A) 1      B) 6      C) -6      D) -2
23.	$-7$ ..... $\mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$
24.	The number of integers between -2 and 2 is ..... A) 0      B) 1      C) 2      D) 3
25.	$\mathbb{Z}^+ - \mathbb{Z}^- =$ ..... A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
26.	The number of integers between -3 and 3 is ..... A) 3      B) 4      C) 5      D) 6
27.	$\mathbb{Z}^- - \mathbb{Z}^+ =$ ..... A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
28.	$\{-9\}$ ..... $\mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$

29.	$\mathbb{Z}^+ \cup \{0\} = \dots\dots\dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
30.	$ -3  +  -2  = \dots\dots\dots$ A) 1                      B) 3                      C) 5                      D) 2
31.	$\{-2\} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$
32.	The greatest negative integer is $\dots\dots\dots$ A) 0                      B) 1                      C) -1                      D) Otherwise
33.	$\mathbb{Z}^+ \cup \dots\dots\dots = \mathbb{N}$ A) $\mathbb{Z}^-$ B) $\{0\}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
34.	$\{5\} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$
35.	The smallest positive integer is $\dots\dots\dots$ A) 0                      B) 1                      C) -1                      D) Otherwise
36.	$\mathbb{Z}^- \cup \mathbb{N} = \dots\dots\dots$ A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
37.	The additive identity of integer is $\dots\dots\dots$ A) 0                      B) 1                      C) 2                      D) 3
38.	$6 + (-10) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4
39.	$(-7) + 3 > \dots\dots\dots$ A) -5                      B) -4                      C) 2                      D) 0
40.	The additive neutral of integer is $\dots\dots\dots$ A) 0                      B) 1                      C) 2                      D) 3
41.	$3 + (-11) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4
42.	$8 + (-6) > \dots\dots\dots$ A) 2                      B) -4                      C) 3                      D) 5
43.	The additive inverse of $(-5)$ is $\dots\dots\dots$ A) 5                      B) 7                      C) 9                      D) 11



44.	The additive inverse of $(-7)$ is .....	A) 5	B) 7	C) 9	D) 11
45.	$-10 + 7 =$ .....	A) 3	B) 17	C) $-3$	D) $-17$
46.	$[8 + (-3)] \times (-3) =$ .....	A) $-15$	B) $-4$	C) 15	D) 0
47.	$-10 + 2 =$ .....	A) 3	B) $-8$	C) $-3$	D) $-17$
48.	The value of expression : $(-5) \times [7 + (-5)] =$ .....	A) $-2$	B) $-10$	C) 2	D) 10
49.	$7[6 + (-3)] =$ .....	A) $-42$	B) $-21$	C) 21	D) 18
50.	The additive inverse of 2 is .....	A) $-2$	B) $-4$	C) $-6$	D) $-12$
51.	$ -5  + \dots = 0$	A) $-5$	B) $-10$	C) 0	D) 5
52.	The additive inverse of 4 is .....	A) $-2$	B) $-4$	C) $-6$	D) $-12$
53.	$ -7  + \dots = 0$	A) $-7$	B) $-14$	C) 0	D) 7
54.	$ -2  +  2  =$ .....	A) 0	B) 2	C) 4	D) $-10$
55.	$\dots +  -3  = 0$	A) $-6$	B) $-3$	C) 0	D) 3
56.	$ -7  +  7  =$ .....	A) 0	B) 14	C) 49	D) $-10$
57.	The additive inverse of 0 is .....	A) $-2$	B) $-4$	C) 0	D) $-12$
58.	$6 + (-6) =$ .....	A) 0	B) 12	C) 6	D) $-6$
59.	$5 + (-5) =$ .....	A) 5	B) 10	C) 0	D) $-5$

60.	$9 + (-9) = \dots\dots\dots$ A) 18                      B) 0                      C) 9                      D) -9
61.	$11 + (-11) = \dots\dots\dots$ A) 11                      B) 22                      C) 0                      D) -22
62.	The additive identity of integer is $\dots\dots\dots$ A) 0                      B) 1                      C) 2                      D) 3
63.	The additive inverse of $(-5)$ is $\dots\dots\dots$ A) 5                      B) 7                      C) 9                      D) 11
64.	The additive inverse of 2 is $\dots\dots\dots$ A) -2                      B) -4                      C) -6                      D) -12
65.	The additive inverse of 0 is $\dots\dots\dots$ A) -2                      B) -4                      C) 0                      D) -12
66.	$-5 + 15 = \dots\dots\dots$ A) -10                      B) 20                      C) 10                      D) -20
67.	$5 + (-9) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4
68.	$ -2  +  6  = \dots\dots\dots$ A) 12                      B) 2                      C) -2                      D) 8
69.	$ -9  - 11 = \dots\dots\dots$ A) 12                      B) -2                      C) 8                      D) -12
70.	$2 \times (-8) = \dots\dots\dots$ A) 18                      B) -18                      C) 10                      D) -16
71.	$(-4) \times 9 = \dots\dots\dots$ A) 12                      B) -36                      C) 36                      D) -10
72.	$(-5) \times (-6) = \dots\dots\dots$ A) 18                      B) -30                      C) 30                      D) -10
73.	$(-32) \div (-8) = \dots\dots\dots$ A) 4                      B) -4                      C) 40                      D) -24
74.	$(-18) \div 3 = \dots\dots\dots$ A) -9                      B) -3                      C) -2                      D) -6
75.	$24 \div (-4) = \dots\dots\dots$ A) -2                      B) -3                      C) -4                      D) -6

76.	If $X = 7$ , $y = -6$ then $XY =$ .....	A) 42	B) -42	C) 76	D) -76
77.	$-2 + 6 =$ .....	A) 4	B) 8	C) -8	D) -4
78.	$6 + (-2) =$ .....	A) 4	B) 8	C) -8	D) -4
79.	$-10 + 7 =$ .....	A) 3	B) 17	C) -3	D) -17
80.	$6 \times (-3) =$ .....	A) 18	B) -18	C) 10	D) -10
81.	$(-1) \times 5 =$ .....	A) 5	B) -12	C) 10	D) -5
82.	$(-2) \times (-9) =$ .....	A) 18	B) -18	C) 10	D) -10
83.	$(-12) \div (-2) =$ .....	A) 6	B) -6	C) 10	D) -10
84.	$(-18) \div 2 =$ .....	A) -9	B) -3	C) -2	D) -6
85.	$24 \div (-12) =$ .....	A) -2	B) -3	C) -4	D) -6
86.	$[8 + (-3)] \times (-3) =$ .....	A) -15	B) -4	C) 15	D) 0
87.	If $X = 8$ , $y = 9$ then $XY =$ .....	A) 72	B) -72	C) 89	D) -89
88.	The multiplicative identity of integer is .....	A) 0	B) 1	C) 2	D) 3
89.	$-3 + 9 =$ .....	A) -6	B) 12	C) 6	D) -12
90.	$6 + (-10) =$ .....	A) 4	B) 8	C) -8	D) -4
91.	$-10 + 2 =$ .....	A) 3	B) -8	C) -3	D) -17

92.	$5 \times (-1) = \dots\dots\dots$ A) 18                      B) -18                      C) 10                      D) -5
93.	$(-2) \times 6 = \dots\dots\dots$ A) 12                      B) -12                      C) 10                      D) -10
94.	$(-3) \times (-8) = \dots\dots\dots$ A) 18                      B) -24                      C) 24                      D) -10
95.	$(-8) \div (-4) = \dots\dots\dots$ A) 2                      B) -18                      C) 12                      D) -2
96.	The image of $(5, 1)$ by translation $(X - 1, y + 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$
97.	The image of $(3, 1)$ by translation $(X + 1, y + 2)$ is ..... A) $(3, 2)$ B) $(4, 3)$ C) $(5, 4)$ D) $(6, 5)$
98.	The image of $(3, -3)$ by translation $(-1, -2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$
99.	The image of $(2, 1)$ by translation $(-1, -2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$
100.	The image of $(5, 1)$ by translation $(-1, 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$
101.	The image of the point $(3, 1)$ by the translation $(1, 2)$ is ..... A) $(3, 2)$ B) $(4, 3)$ C) $(5, 4)$ D) $(6, 5)$
102.	If A $(-2, 2)$ and B $(-5, 2)$ , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4
103.	If A $(0, 1)$ and B $(0, 5)$ , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4
104.	The image of $(-5, -4)$ by translation $(X - 1, y - 2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$
105.	The image of $(5, -1)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$
106.	The image of $(4, 3)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$
107.	The image of $(4, 2)$ by translation $(X + 1, y + 2)$ is ..... A) $(3, 2)$ B) $(4, 3)$ C) $(5, 4)$ D) $(6, 5)$



108.	The image of $(-5, -4)$ by translation $(-1, -2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$
109.	If A $(-2, 2)$ and B $(-3, 2)$ , then AB = ..... Length units. A) 1      B) 2      C) 3      D) 4
110.	If A $(0, 1)$ and B $(0, 3)$ , then AB = ..... Length units. A) 1      B) 2      C) 3      D) 4
111.	The image of $(-3, -2)$ by translation $(X-1, y-2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$
112.	The image of $(3, 2)$ by translation $(X-1, y-2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$
113.	The image of $(2, 4)$ by translation $(X-1, y+2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$
114.	The image of $(2, 0)$ by translation $(X+1, y+2)$ is ..... A) $(3, 2)$ B) $(4, 3)$ C) $(5, 4)$ D) $(6, 5)$
115.	The image of $(-3, -2)$ by translation $(-1, -2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$
116.	The image of $(3, 2)$ by translation $(-1, -2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$
117.	The image of $(2, 4)$ by translation $(-1, 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$
118.	The image of $(-4, -3)$ by translation $(X-1, y-2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$
119.	The image of $(2, -4)$ by translation $(X-1, y-2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$
120.	The image of $(5, 4)$ by translation $(X-1, y-2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$
121.	The image of $(4, 2)$ by translation $(X-1, y+2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$
122.	The image of $(-4, -3)$ by translation $(-1, -2)$ is ..... A) $(-3, -3)$ B) $(-4, -4)$ C) $(-5, -5)$ D) $(-6, -6)$

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Choose the correct Answer

1.  $|-5| =$  ☒ A) -5 ☒ B) 5 ☐ C) 10 ☐ D) 0
2.  $\frac{15}{5} \dots \mathbb{Z}$   
☒ A)  $\in$  ☐ B)  $\notin$  ☐ C)  $\subset$  ☐ D)  $\not\subset$
3. If  $|X| = 4$ , then  $X =$  ☒ A) 5, -5 ☒ B) 4, -4 ☐ C) 3, -3 ☐ D) 7, -7
4. The integer included between -5 and 3 is ☐ A) 4 ☒ B) 1 ☐ C) -6 ☐ D) -7
5.  $\mathbb{Z} = \mathbb{Z}^+ \cup$  ☒ A)  $\mathbb{Z}^-, \{0\}$  ☐ B)  $\mathbb{Z}^+, \{0\}$  ☐ C)  $\{0\}, \mathbb{N}$  ☐ D)  $\mathbb{N}, \{0\}$
6.  $|-7| =$  ☐ A) -7 ☒ B) 7 ☐ C) 8 ☐ D) -8
7.  $3 + |-3| =$  ☐ A) 0 ☒ B) 6 ☐ C) 3 ☐ D) -3
8. If  $|X| = 5$ , then  $X =$  ☒ A) 5, -5 ☐ B) 4, -4 ☐ C) 3, -3 ☐ D) 7, -7
9.  $\mathbb{Z} - \mathbb{Z}^- =$  ☐ A)  $\mathbb{Z}^-$  ☐ B)  $\emptyset$  ☒ C)  $\mathbb{N}$  ☐ D)  $\mathbb{Z}^+$
10.  $|-1| =$  ☐ A) -1 ☒ B) 1 ☐ C) 10 ☐ D) 0
11.  $5 + |-5| =$  ☐ A) 0 ☐ B) 5 ☒ C) 10 ☐ D) -10
12.  $\mathbb{Z} - \mathbb{N} =$  ☒ A)  $\mathbb{Z}^-$  ☐ B)  $\emptyset$  ☐ C)  $\mathbb{N}$  ☐ D)  $\mathbb{Z}^+$
13.  $7 + |-3| =$  ☐ A) 2 ☒ B) 10 ☐ C) 4 ☐ D) -4
14.  $2 \dots \mathbb{Z}$   
☒ A)  $\in$  ☐ B)  $\notin$  ☐ C)  $\subset$  ☐ D)  $\not\subset$

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15. If  $|X| = 7$ , then  $X =$  ☐ A) 5, -5 ☐ B) 4, -4 ☐ C) 3, -3 ☐ D) 7, -7
16.  $\mathbb{Z} - \mathbb{Z}^+ =$  ☐ A)  $\mathbb{Z}^-$  ☐ B)  $\emptyset$  ☐ C)  $\mathbb{N}$  ☐ D)  $\mathbb{Z}^+$

13.

$7 + |-3| =$

A) 2

B) 10

C) 4

D) -4



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15.

If  $|X| = 7$ , then  $X =$  \_\_\_\_\_ or \_\_\_\_\_

A) 5, -5

B) 4, -4

C) 3, -3

D) 7, -7

16.

$\mathbb{Z} - \mathbb{Z}^+ =$

A)  $\mathbb{Z}^-$ B)  $\{0\} \cup \mathbb{Z}^-$ C)  $\mathbb{N}$ D)  $\{0\} \cup \mathbb{Z}^+$ 

17.

$|\frac{5-8}{3}| =$

A) 1

B) 6

C) -6

D) -2

18.

$9 + |-2| =$

A) 7

B) 11

C) 9

D) -11

19.

$5 \in \mathbb{Z}$

A)  $\in$ B)  $\notin$ C)  $\subset$ D)  $\not\subset$ 

20.

The number of integers between -1 and 1 is \_\_\_\_\_

A) 0

B) 1

C) 2

D) 3

21.

$\mathbb{Z}^+ \cap \mathbb{Z}^- =$

A)  $\mathbb{Z}$ B)  $\emptyset$ C)  $\mathbb{N}$ D)  $\mathbb{Z}^+$ 

22.

$|\frac{3-8}{5}| =$

A) 1

B) 6

C) -6

D) -2

23.

$-7 \in \mathbb{Z}$

A)  $\in$ B)  $\notin$ C)  $\subset$ D)  $\not\subset$ 

24.

The number of integers between -2 and 2 is \_\_\_\_\_

A) 0

B) 1

C) 2

D) 3

25.

$\mathbb{Z}^+ - \mathbb{Z}^- =$

A)  $\mathbb{Z}^-$ B)  $\emptyset$ C)  $\mathbb{N}$ D)  $\mathbb{Z}^+$ 

26.

The number of integers between -3 and 3 is \_\_\_\_\_

A) 3

B) 4

C) 5

D) 6

27.

$\mathbb{Z} - \mathbb{Z}^+ =$

A)  $\mathbb{Z}^-$ B)  $\emptyset$ C)  $\mathbb{N}$ D)  $\mathbb{Z}^+$ 

28.

$\{-9\} \subset \mathbb{Z}$

A)  $\in$ B)  $\notin$ C)  $\subset$ D)  $\not\subset$ 

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29.

$\mathbb{Z}^+ \cup \{0\} =$

A)  $\mathbb{Z}^-$ B)  $\emptyset$ C)  $\mathbb{N}$ D)  $\mathbb{Z}^+$



29.  $\mathbb{Z}^+ \cup \{0\} =$  .....  
 A)  $\mathbb{Z}^-$  B)  $\emptyset$  C)  $\mathbb{N}$  D)  $\mathbb{Z}^+$
30.  $|-3| + |-2| =$  .....  
 A) 1 B) 3 C) 5 D) 2
31.  $\{-2\}$  .....  $\mathbb{Z}$   
 A)  $\in$  B)  $\notin$  C)  $\subset$  D)  $\not\subset$
32. The greatest negative integer is .....  
 A) 0 B) 1 C) -1 D) Otherwise
33.  $\mathbb{Z}^+ \cup$  .....  $= \mathbb{N}$   
 A)  $\mathbb{Z}^-$  B)  $\{0\}$  C)  $\mathbb{N}$  D)  $\mathbb{Z}^+$
34.  $\{5\}$  .....  $\mathbb{Z}$   
 A)  $\in$  B)  $\notin$  C)  $\subset$  D)  $\not\subset$
35. The smallest positive integer is .....  
 A) 0 B) 1 C) -1 D) Otherwise
36.  $\mathbb{Z}^- \cup \mathbb{N} =$  .....  
 A)  $\mathbb{Z}$  B)  $\emptyset$  C)  $\mathbb{N}$  D)  $\mathbb{Z}^+$
37. The additive identity of integer is .....  
 A) 0 B) 1 C) 2 D) 3
38.  $6 + (-10) =$  .....  
 A) 4 B) 8 C) -8 D) -4
39.  $(-7) + 2 >$  .....  
 A) -5 B) -4 C) 2 D) 0
40. The additive neutral of integer is .....  
 A) 0 B) 1 C) 2 D) 3
41.  $3 + (-11) =$  .....  
 A) 4 B) 8 C) -8 D) -4
42.  $8 + (-6) >$  .....  
 A) 2 B) -4 C) 3 D) 5
43. The additive inverse of  $(-5)$  is .....  
 A) 5 B) 7 C) 9 D) 11

44. The additive inverse of  $(-7)$  is .....  
 A) 5 B) 7 C) 9 D) 11
45.  $-10 + 7 =$  .....  
 A) 3 B) 17 C) -3 D) -17



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44. The additive inverse of  $(-7)$  is \_\_\_\_\_  
 A) 5 B) 7 C) 9 D) 11
45.  $-10 + 7 =$  \_\_\_\_\_  
 A) 3 B) 17 C) -3 D) -17
46.  $[6 + (-8)] \times (-3) =$  \_\_\_\_\_  
 A) -15 B) -4 C) 15 D) 0
47.  $-10 + 2 =$  \_\_\_\_\_  
 A) 3 B) -8 C) -3 D) -17
48. The value of expression:  $(-5) \times [7 + (-5)] =$  \_\_\_\_\_  
 A) -2 B) -10 C) 2 D) 10
49.  $7[6 + (-3)] =$  \_\_\_\_\_  
 A) -42 B) -21 C) 21 D) 18
50. The additive inverse of 2 is \_\_\_\_\_  
 A) -2 B) -4 C) -6 D) -12
51.  $|-5| +$  \_\_\_\_\_  $= 0$   
 A) -5 B) -10 C) 0 D) 5
52. The additive inverse of 4 is \_\_\_\_\_  
 A) -2 B) -4 C) -6 D) -12
53.  $|-7| +$  \_\_\_\_\_  $= 0$   
 A) -7 B) -14 C) 0 D) 7
54.  $|-2| + |2| =$  \_\_\_\_\_  
 A) 0 B) 2 C) 4 D) -10
55. \_\_\_\_\_  $+ |-3| = 0$   
 A) -6 B) -3 C) 0 D) 3
56.  $|-7| + |7| =$  \_\_\_\_\_  
 A) 0 B) 14 C) 49 D) -10
57. The additive inverse of 0 is \_\_\_\_\_  
 A) -2 B) -4 C) 0 D) -12
58.  $6 + (-6) =$  \_\_\_\_\_  
 A) 0 B) 12 C) 6 D) -6
59.  $5 + (-5) =$  \_\_\_\_\_  
 A) 5 B) 10 C) 0 D) -5

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60.  $9 + (-9) =$  \_\_\_\_\_  
 A) 18 B) 0 C) 9 D) -9
61.  $11 + (-11) =$  \_\_\_\_\_  
 A) 11 B) 22 C) 2 D) 22

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60.  $9 + (-9) =$  .....  
A) 18      B) 0      C) 9      D) -9
61.  $11 + (-11) =$  .....  
A) 11      B) 22      C) 0      D) -22
62. The additive identity of integer is .....  
A) 0      B) 1      C) 2      D) 3
63. The additive inverse of  $(-5)$  is .....  
A) 5      B) 7      C) 9      D) 11
64. The additive inverse of 2 is .....  
A) -2      B) -4      C) -6      D) -12
65. The additive inverse of 0 is .....  
A) -2      B) -4      C) 0      D) -12
66.  $-5 + 15 =$  .....  
A) -10      B) 20      C) 10      D) -20
67.  $5 + (-9) =$  .....  
A) 4      B) 8      C) -8      D) -4
68.  $|-2| + |6| =$  .....  
A) 12      B) 2      C) -2      D) 8
69.  $|-9| - 11 =$  .....  
A) 12      B) -2      C) 8      D) -12
70.  $2 \times (-8) =$  .....  
A) 18      B) -16      C) 10      D) -16
71.  $(-4) \times 9 =$  .....  
A) 12      B) -36      C) 36      D) -10
72.  $(-5) \times (-6) =$  .....  
A) 18      B) -30      C) 30      D) -10
73.  $(-32) \div (-8) =$  .....  
A) 4      B) -4      C) 40      D) -24
74.  $(-18) \div 3 =$  .....  
A) -9      B) -3      C) -2      D) -6
75.  $24 \div (-4) =$  .....  
A) -2      B) -3      C) -4      D) -6

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If  $X = 7$ ,  $Y = -6$  then  $X \div Y =$

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76. If  $X = 7$ ,  $y = -6$  then  $XY =$   
 A) 42 B) -42 C) 76 D) -76
77.  $-2 + 6 =$   
 A) 4 B) 8 C) -8 D) -4
78.  $6 + (-2) =$   
 A) 4 B) 8 C) -8 D) -4
79.  $-10 + 7 =$   
 A) 3 B) 17 C) -3 D) -17
80.  $6 \times (-3) =$   
 A) 18 B) -18 C) 10 D) -10
81.  $(-1) \times 5 =$   
 A) 5 B) -12 C) 10 D) -5
82.  $(-2) \times (-9) =$   
 A) 18 B) -18 C) 10 D) -10
83.  $(-18) \div (-2) =$   
 A) 6 B) -6 C) 10 D) -10
84.  $(-18) \div 2 =$   
 A) -9 B) -3 C) -2 D) -6
85.  $24 \div (-12) =$   
 A) -2 B) -3 C) -4 D) -6
86.  $[8 + (-3)] \times (-3) =$   
 A) -15 B) -4 C) 15 D) 0
87. If  $X = 8$ ,  $y = 9$  then  $XY =$   
 A) 72 B) -72 C) 89 D) -89
88. The multiplicative identity of integer is  
 A) 0 B) 1 C) 2 D) 3
89.  $-3 + 9 =$   
 A) -6 B) 12 C) 6 D) -12
90.  $6 + (-10) =$   
 A) 4 B) 8 C) -8 D) -4
91.  $-10 + 2 =$   
 A) 3 B) -8 C) -3 D) -17

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92.  $5 \times (-1) =$   
 A) 18 B) -18 C) 10 D) -5
93.  $(-2) \times 6 =$



A) 3 B) -8 C) -3 D) -17

(6)

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92.  $5 \times (-1) =$  \_\_\_\_\_  
A) 18 B) -18 C) 10 D) -5
93.  $(-2) \times 6 =$  \_\_\_\_\_  
A) 12 B) -12 C) 10 D) -10
94.  $(-3) \times (-8) =$  \_\_\_\_\_  
A) 18 B) -24 C) 24 D) -10
95.  $(-8) \div (-4) =$  \_\_\_\_\_  
A) 2 B) -18 C) 12 D) -2
96. The image of  $(5, 1)$  by translation  $(X-1, y+2)$  is \_\_\_\_\_.  
A)  $(4, 3)$  B)  $(3, 4)$  C)  $(2, 5)$  D)  $(1, 6)$
97. The image of  $(3, 1)$  by translation  $(X+1, y+2)$  is \_\_\_\_\_.  
A)  $(3, 2)$  B)  $(4, 3)$  C)  $(5, 4)$  D)  $(6, 5)$
98. The image of  $(3, -3)$  by translation  $(-1, 2)$  is \_\_\_\_\_.  
A)  $(4, -3)$  B)  $(3, -4)$  C)  $(2, -5)$  D)  $(1, -6)$
99. The image of  $(2, 1)$  by translation  $(-1, -2)$  is \_\_\_\_\_.  
A)  $(4, 2)$  B)  $(3, 1)$  C)  $(2, 0)$  D)  $(1, -1)$
100. The image of  $(5, 1)$  by translation  $(-1, 2)$  is \_\_\_\_\_.  
A)  $(4, 3)$  B)  $(3, 4)$  C)  $(2, 5)$  D)  $(1, 6)$
101. The image of the point  $(3, 1)$  by the translation  $(1, 2)$  is \_\_\_\_\_.  
A)  $(3, 2)$  B)  $(4, 3)$  C)  $(5, 4)$  D)  $(6, 5)$
102. If A  $(-2, 2)$  and B  $(-5, 2)$ , then AB = \_\_\_\_\_ Length units.  
A) 1 B) 2 C) 3 D) 4
103. If A  $(0, 1)$  and B  $(0, 5)$ , then AB = \_\_\_\_\_ Length units.  
A) 1 B) 2 C) 3 D) 4
104. The image of  $(-5, -4)$  by translation  $(X-1, y-2)$  is \_\_\_\_\_.  
A)  $(-3, -3)$  B)  $(-4, -4)$  C)  $(-5, -5)$  D)  $(-6, -6)$
105. The image of  $(5, -1)$  by translation  $(X-1, y-2)$  is \_\_\_\_\_.  
A)  $(4, -3)$  B)  $(3, -4)$  C)  $(2, -5)$  D)  $(1, -6)$
106. The image of  $(4, 3)$  by translation  $(X-1, y-2)$  is \_\_\_\_\_.  
A)  $(4, 2)$  B)  $(3, 1)$  C)  $(2, 0)$  D)  $(1, -1)$
107. The image of  $(4, 2)$  by translation  $(X+1, y+2)$  is \_\_\_\_\_.  
A)  $(3, 2)$  B)  $(4, 3)$  C)  $(5, 4)$  D)  $(6, 5)$

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A) (3, 2) B) (4, 3) C) (5, 4) D) (6, 5)

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108. The image of  $(-5, -4)$  by translation  $(-1, -2)$  is D)  $(-6, -6)$ .  
A)  $(-3, -3)$  B)  $(-4, -4)$  C)  $(-5, -5)$
109. If A  $(-2, 3)$  and B  $(-3, 2)$ , then  $AB =$  A) 1 Length units.  
B) 2 C) 3 D) 4
110. If A  $(0, 1)$  and B  $(0, 3)$ , then  $AB =$  B) 2 Length units.  
A) 1 C) 3 D) 4
111. The image of  $(-3, -2)$  by translation  $(X-1, y-2)$  is B)  $(-4, -4)$ .  
A)  $(-3, -3)$  C)  $(-5, -5)$  D)  $(-6, -6)$
112. The image of  $(3, 2)$  by translation  $(X-1, y-2)$  is C)  $(2, 0)$ .  
A)  $(4, 2)$  B)  $(3, 1)$  D)  $(1, -1)$
113. The image of  $(2, 4)$  by translation  $(X-1, y+2)$  is D)  $(1, 6)$ .  
A)  $(4, 3)$  B)  $(3, 4)$  C)  $(2, 5)$
114. The image of  $(2, 0)$  by translation  $(X+1, y+2)$  is A)  $(3, 2)$ .  
B)  $(4, 3)$  C)  $(5, 4)$  D)  $(6, 5)$
115. The image of  $(-3, -2)$  by translation  $(-1, -2)$  is B)  $(-4, -4)$ .  
A)  $(-3, -3)$  C)  $(-5, -5)$  D)  $(-6, -6)$
116. The image of  $(3, 2)$  by translation  $(-1, -2)$  is C)  $(2, 0)$ .  
A)  $(4, 2)$  B)  $(3, 1)$  D)  $(1, -1)$
117. The image of  $(2, 4)$  by translation  $(-1, 2)$  is D)  $(1, 6)$ .  
A)  $(4, 3)$  B)  $(3, 4)$  C)  $(2, 5)$
118. The image of  $(-4, -3)$  by translation  $(X-1, y-2)$  is C)  $(-5, -5)$ .  
A)  $(-3, -3)$  B)  $(-4, -4)$  D)  $(-6, -6)$
119. The image of  $(2, -4)$  by translation  $(X-1, y-2)$  is D)  $(1, -6)$ .  
A)  $(4, -3)$  B)  $(3, -4)$  C)  $(2, -5)$
120. The image of  $(5, 4)$  by translation  $(X-1, y-2)$  is A)  $(4, 2)$ .  
B)  $(3, 1)$  C)  $(2, 0)$  D)  $(1, -1)$
121. The image of  $(4, 2)$  by translation  $(X-1, y+2)$  is B)  $(3, 4)$ .  
A)  $(4, 3)$  C)  $(2, 5)$  D)  $(1, 6)$
122. The image of  $(-4, -3)$  by translation  $(-1, -2)$  is C)  $(-5, -5)$ .  
A)  $(-3, -3)$  B)  $(-4, -4)$  D)  $(-6, -6)$

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**Choose the correct answer :**

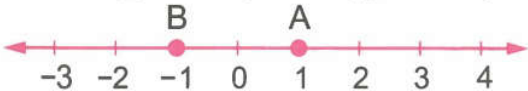
1.  $\{0\}$  .....  $\mathbb{N}$  ( $\in$  **or**  $\notin$  **or**  $\subset$  **or**  $\not\subset$ )
2.  $\mathbb{Z}^+ \cup \{0\} =$  ..... ( $\mathbb{Z}$  **or**  $\mathbb{N}$  **or**  $\mathbb{Z}$ )
3. The image of the point  $(-3, 4)$  by translation  $(x, y - 4)$  is .....  
( $(-3, 0)$  **or**  $(-7, 4)$  **or**  $(-3, 8)$  **or**  $(-1, 4)$ )
4. The integer that lies between  $-4$  and  $-1$  is .....  
( $-2$  **or**  $-5$  **or**  $3$  **or**  $-4$ )
5.  $\{|-13|\}$  .....  $\mathbb{Z}$  ( $\in$  **or**  $\notin$  **or**  $\subset$  **or**  $\not\subset$ )
6. The multiplicative identity element in  $\mathbb{Z}$  is .....  
( $-1$  **or**  $1$  **or**  $0$  **or**  $2$ )
7.  $\mathbb{Z}^+ \cap \mathbb{Z}^- =$  ..... ( $\{0\}$  **or**  $\emptyset$  **or**  $\mathbb{Z}$  **or** zero)
8.  $3 - |-3| =$  ..... ( $0$  **or**  $1$  **or**  $3$  **or**  $6$ )
9.  $\mathbb{Z} = \mathbb{N} \cup$  ..... ( $\mathbb{Z}^+$  **or**  $\mathbb{Z}^-$  **or**  $\{0\}$  **or**  $\emptyset$ )
10.  $-8$  .....  $\mathbb{Z}$  ( $\in$  **or**  $\notin$  **or**  $\subset$  **or**  $\not\subset$ )
11.  $|-5| + 7 =$  ..... ( $2$  **or** zero **or**  $7$  **or**  $12$ )
12. If  $X(-4, 1)$  and  $Y(-4, -3)$ , then the length of  $\overline{XY} =$  ..... units.
13.  $\frac{3}{5}$  .....  $\mathbb{Z}$  ( $\in$  **or**  $\notin$  **or**  $\subset$  **or**  $\not\subset$ )
14. The image of the point  $A(1, 2)$  by translation  $(1, -1)$  is .....  
[a]  $(2, 1)$  [b]  $(2, 3)$  [c]  $(1, 1)$  [d]  $(1, 3)$
15. The image of the point  $(-1, 2)$  by translation of magnitude of 3 units in the positive direction of the  $x$ -axis is .....  
[a]  $(-1, 5)$  [b]  $(2, 2)$  [c]  $(-2, 2)$  [d]  $(-1, 3)$
16. The image of the point  $(-3, 4)$  by translation of magnitude of 4 units in the negative direction of the  $y$ -axis is .....  
[a]  $(-3, 0)$  [b]  $(-7, 4)$  [c]  $(-3, 8)$  [d]  $(-1, 4)$

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17.	If $\hat{A}$ (3 , - 3) is the image of A by translation $(x , y) \longrightarrow (x - 1 , y - 4)$ , then the point A is .....	[a] (2 , - 7)      [b] (4 , 1)      [c] (- 4 , - 1)      [d] (2 , 1)
18.	The image of point (3 , - 2) by translation (4 , 2) is .....	( (7 , 0) <b>or</b> (- 7 , 0) <b>or</b> (- 1 , 4) <b>or</b> (1 , 7) )
19.	If X (- 2 , 1) and Y (3 , 1) , then the length of $\overline{XY}$ = ..... units.	( 0 <b>or</b> 1 <b>or</b> 3 <b>or</b> 5 )
20.	$ - 3  +  3  =$ .....	( zero <b>or</b> 1 <b>or</b> - 6 <b>or</b> 6 )
21.	The number of integers between - 1 and 3 is .....	( - 2 <b>or</b> - 1 <b>or</b> 3 <b>or</b> - 3 )
22.	{zero} ..... $\mathbb{N}$	( $\in$ <b>or</b> $\notin$ <b>or</b> $\subset$ <b>or</b> $\not\subset$ )
23.	If $\text{zero} \in \{5 , x - 2\}$ , then $x =$ .....	( zero <b>or</b> - 5 <b>or</b> 2 <b>or</b> - 2 )
24.	The multiplicative neutral element in $\mathbb{Z}$ is .....	( 0 <b>or</b> 1 <b>or</b> 2 <b>or</b> - 2 )
25.	The image of the point (4 , - 2) by translation $(x + 2 , y - 1)$ is .....	( (2 , - 1) <b>or</b> (6 , - 3) <b>or</b> (2 , - 2) <b>or</b> (2 , - 3) )
26.	$ - 4  -  4  =$ .....	( zero <b>or</b> 1 <b>or</b> 8 <b>or</b> - 8 )
27.	$\left\{\frac{2}{3-4}\right\}$ ..... $\mathbb{Z}$	( $\in$ <b>or</b> $\notin$ <b>or</b> $\subset$ <b>or</b> $\not\subset$ )
28.	$(- 3) \times  - 5  =$ .....	( 15 <b>or</b> - 15 <b>or</b> 8 <b>or</b> - 8 )
29.	The greatest negative integer is .....	
30.	The image of the point (- 3 , 4) by translation $(x , y - 4)$ is .....	( (- 3 , 0) <b>or</b> (- 7 , 4) <b>or</b> (- 3 , 8) <b>or</b> (- 1 , 4) )
31.	$\mathbb{Z} \cap \mathbb{N} =$ .....	( $\mathbb{Z}^+$ <b>or</b> $\mathbb{Z}$ <b>or</b> {0} <b>or</b> $\mathbb{N}$ )
32.	$- - 6  + 6$ ..... $\mathbb{Z}^+$	( $\in$ <b>or</b> $\notin$ <b>or</b> $\subset$ <b>or</b> $\not\subset$ )



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33.	$\mathbb{Z} - \mathbb{N} = \dots\dots\dots$	( $\mathbb{Z}^+$ or $\{0\}$ or $\mathbb{Z}^-$ or $0$ )
34.	The image of the point A $(-4, 3)$ by translation $(-1, -4)$ is $\dots\dots\dots$ ( $(-5, -7)$ or $(-5, -1)$ or $(-7, 3)$ or $(-3, -1)$ )	
35.	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$ ( $2$ or $-3$ or $-5$ or $5$ )	
36.	$( -9  + 3) \div 2 \dots\dots\dots \mathbb{Z}$	( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
37.	The set of non-negative integers is $\dots\dots\dots$	( $\mathbb{C}$ or $\mathbb{Z}$ or $\{0\}$ or $\mathbb{N}$ )
38.	The integer which satisfies the inequality : $y < -3$ is $\dots\dots\dots$ ( $-2$ or $-8$ or $0$ or $1$ )	
39.	The number which satisfies the inequality : $x > -2$ is $\dots\dots\dots$ ( $1$ or $-4$ or $-3$ or $-2$ )	
40.	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$	( $\mathbb{Z}$ or $\mathbb{N}$ or $0$ or $\{\}$ )
41.	$ \frac{6-12}{3}  \dots\dots\dots \mathbb{N}$	( $\notin$ or $\in$ or $\not\subset$ or $\subset$ )
42.	<b>In the opposite figure :</b> The distance between the two points A and B = $\dots\dots\dots$ units.	 ( $2$ or $-2$ or $1$ or $3$ )
43.	If $x \in \{2, 5, -3\} \cap \{-5, -2, -3\}$ , then $x = \dots\dots\dots$ ( $-5$ or $-3$ or $-2$ or $2$ )	
44.	$(-7) \dots\dots\dots (- -5 )$	( $>$ or $<$ or $=$ or otherwise)
45.	The image of the point ( $\dots\dots\dots$ , $\dots\dots\dots$ ) by translation $(x - 3, y + 4)$ is $(-5, -3)$ ( $(-8, 15)$ or $(-2, 7)$ or $(-8, 7)$ or $(-2, -7)$ )	
46.	$\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$	( $\emptyset$ or $\mathbb{N}$ or $\mathbb{Z}^+$ or $\{0\}$ )
47.	$(-5) \times  -4  = \dots\dots\dots$	( $20$ or $-20$ or $9$ or $-9$ )
48.	$\mathbb{Z} = \mathbb{Z}^- \cup \dots\dots\dots \cup \dots\dots\dots$	
49.	$ -98  \dots\dots\dots \mathbb{Z}^-$	( $\notin$ or $\in$ or $\subset$ or $\not\subset$ )



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50.  $|-98| \dots\dots\dots \mathbb{Z}^-$  ( $\notin$  or  $\in$  or  $\subset$  or  $\not\subset$ )
51. If A ( - 2 , 1 ) and B ( 3 , 1 ) , then the length  $\overline{AB}$  =  $\dots\dots\dots$  length units.  
( 0 or 1 or 3 or 5 )
52. The integer that lies between - 4 and - 1 is  $\dots\dots\dots$   
( - 2 or - 5 or 3 or - 4 )
53. The multiplicative identity element in  $\mathbb{Z}$  is  $\dots\dots\dots$   
( - 1 or 1 or 0 or 2 )
54. If X ( 3 , 8 ) , Y ( 3 , 4 ) , then the length of  $\overline{XY}$  =  $\dots\dots\dots$  length units.  
( 4 or 6 or 12 or 5 )
55. The greatest negative integer is  $\dots\dots\dots$  ( 2 or 1 or 0 or - 1 )
56. The image of the point ( 3 , 0 ) by translation of magnitude 3 units in the negative direction of X-axis is  $\dots\dots\dots$   
( ( 3 , 3 ) or ( 0 , 0 ) or ( 3 , - 3 ) or ( 0 , - 3 ) )
57.  $\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$  (  $\mathbb{Z}^-$  or  $\mathbb{Z}^+$  or  $\mathbb{N}$  or {zero} )
58.  $\mathbb{Z}^+ \cup \{0\} = \dots\dots\dots$  (  $\mathbb{Z}$  or  $\mathbb{Z}^-$  or  $\mathbb{N}$  or  $\emptyset$  )
59. The smallest positive number is  $\dots\dots\dots$  ( 1 or - 1 or  $\emptyset$  or zero )
60. - 7  $\dots\dots\dots$  - 11 ( < or > or = or  $\leq$  )
61. The integer number just before the number - 5 is  $\dots\dots\dots$   
( - 6 or - 4 or 4 or 6 )
62. The number of integers between - 2 and 2 =  $\dots\dots\dots$  ( 2 or 3 or 4 or 5 )
63.  $-2 + 6 = \dots\dots\dots$  ( 4 or - 4 or 8 or - 8 )
64.  $|-5| + \dots\dots\dots = 0$  ( - 5 or 5 or 0 or 1 )
65. The additive inverse of ( - 5 ) is  $\dots\dots\dots$  ( - 10 or 5 or 0 or - 5 )
66.  $4 + (-6) > \dots\dots\dots$  ( 2 or 0 or - 2 or - 4 )
67.  $6 \times (-3) = \dots\dots\dots$  ( 18 or - 18 or 9 or - 9 )
68.  $(-8) \div (-4) = \dots\dots\dots$  ( 2 or - 2 or 4 or 32 )

**Choose the correct answer :**

1.  $\{0\}$  .....  $\mathbb{N}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )
2.  $\mathbb{Z}^+ \cup \{0\} =$  ..... ( $\mathbb{Z}$  or  $\mathbb{N}$  or  $\mathbb{Z}$ )
3. The image of the point  $(-3, 4)$  by translation  $(x, y - 4)$  is .....  
(  $(-3, 0)$  or  $(-7, 4)$  or  $(-3, 8)$  or  $(-1, 4)$  )
4. The integer that lies between  $-4$  and  $-1$  is .....  
(  $-2$  or  $-5$  or  $3$  or  $-4$  )
5.  $\{|-13|\}$  .....  $\mathbb{Z}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )
6. The multiplicative identity element in  $\mathbb{Z}$  is .....  
(  $-1$  or  $1$  or  $0$  or  $2$  )
7.  $\mathbb{Z}^+ \cap \mathbb{Z}^- =$  ..... ( $\{0\}$  or  $\emptyset$  or  $\mathbb{Z}$  or zero )
8.  $3 - |-3| =$  ..... ( $0$  or  $1$  or  $3$  or  $6$  )
9.  $\mathbb{Z} = \mathbb{N} \cup$  ..... ( $\mathbb{Z}^+$  or  $\mathbb{Z}^-$  or  $\{0\}$  or  $\emptyset$  )
10.  $-8$  .....  $\mathbb{Z}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
11.  $|-5| + 7 =$  ..... ( $2$  or zero or  $7$  or  $12$  )
12. If  $X(-4, 1)$  and  $Y(-4, -3)$ , then the length of  $\overline{XY} =$   $4$  units.
13.  $\frac{3}{5}$  .....  $\mathbb{Z}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
14. The image of the point  $A(1, 2)$  by translation  $(1, -1)$  is .....  
[a]  $(2, 1)$  [b]  $(2, 3)$  [c]  $(1, 1)$  [d]  $(1, 3)$
15. The image of the point  $(-1, 2)$  by translation of magnitude of 3 units in the positive direction of the  $x$ -axis is .....  
[a]  $(-1, 5)$  [b]  $(2, 2)$  [c]  $(-2, 2)$  [d]  $(-1, 3)$
16. The image of the point  $(-3, 4)$  by translation of magnitude of 4 units in the negative direction of the  $y$ -axis is .....  
[a]  $(-3, 0)$  [b]  $(-7, 4)$  [c]  $(-3, 8)$  [d]  $(-1, 4)$

17. If  $\hat{A}(3, -3)$  is the image of  $A$  by translation  $(x, y) \rightarrow (x-1, y-4)$ , then the point  $A$  is .....  
 [a]  $(2, -7)$       [b]  $(4, 1)$       [c]  $(-4, -1)$       [d]  $(2, 1)$
- 
18. The image of point  $(3, -2)$  by translation  $(4, 2)$  is .....  
 (  $(7, 0)$  or  $(-7, 0)$  or  $(-1, 4)$  or  $(1, 7)$  )
- 
19. If  $X(-2, 1)$  and  $Y(3, 1)$ , then the length of  $\overline{XY} = \dots\dots\dots$  units.  
 (  $0$  or  $1$  or  $3$  or  $5$  )
- 
20.  $|-3| + |3| = \dots\dots\dots$  ( zero or  $1$  or  $-6$  or  $6$  )
- 
21. The number of integers between  $-1$  and  $3$  is .....  
 (  $-2$  or  $-1$  or  $3$  or  $-3$  )
- 
22.  $\{\text{zero}\} \dots\dots\dots \mathbb{N}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- 
23. If  $\text{zero} \in \{5, x-2\}$ , then  $x = \dots\dots\dots$  ( zero or  $-5$  or  $2$  or  $-2$  )
- 
24. The multiplicative neutral element in  $\mathbb{Z}$  is .....  
 (  $0$  or  $1$  or  $2$  or  $-2$  )
- 
25. The image of the point  $(4, -2)$  by translation  $(x+2, y-1)$  is .....  
 (  $(2, -1)$  or  $(6, -3)$  or  $(2, -2)$  or  $(2, -3)$  )
- 
26.  $|-4| - |4| = \dots\dots\dots$  ( zero or  $1$  or  $8$  or  $-8$  )
- 
27.  $\{\frac{2}{3-4}\} \dots\dots\dots \mathbb{Z}$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )
- 
28.  $(-3) \times |-5| = \dots\dots\dots$  (  $15$  or  $-15$  or  $8$  or  $-8$  )
- 
29. The greatest negative integer is  $-1$  2/4
- 
30. The image of the point  $(-3, 4)$  by translation  $(x, y-4)$  is .....  
 (  $(-3, 0)$  or  $(-7, 4)$  or  $(-3, 8)$  or  $(-1, 4)$  )
- 
31.  $\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$  (  $\mathbb{Z}^+$  or  $\mathbb{Z}$  or  $\{0\}$  or  $\mathbb{N}$  )
- 
32.  $-|-6| + 6 \dots\dots\dots \mathbb{Z}^+$  (  $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$  )

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33.  $\mathbb{Z} - \mathbb{N} = \dots\dots\dots$  ( $\mathbb{Z}^+$  or  $\{0\}$  or  $\mathbb{Z}^-$  or  $0$ )
34. The image of the point A  $(-4, 3)$  by translation  $(-1, -4)$  is  $\dots\dots\dots$   
 $((-5, -7)$  or  $(-5, -1)$  or  $(-7, 3)$  or  $(-3, -1))$
35. If  $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then  $a = \dots\dots\dots$   
 $(2$  or  $-3$  or  $-5$  or  $5)$
36.  $(|-9| + 3) + 2 \dots\dots\dots \mathbb{Z}$  ( $\in$  or  $\notin$  or  $\subset$  or  $\not\subset$ )
37. The set of non-negative integers is  $\dots\dots\dots$  ( $\mathbb{C}$  or  $\mathbb{Z}$  or  $\{0\}$  or  $\mathbb{N}$ )
38. The integer which satisfies the inequality :  $y < -3$  is  $\dots\dots\dots$   
 $(-2$  or  $-8$  or  $0$  or  $1)$
39. The number which satisfies the inequality :  $x > -2$  is  $\dots\dots\dots$   
 $(1$  or  $-4$  or  $-3$  or  $-2)$
40.  $\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$  ( $\mathbb{Z}$  or  $\mathbb{N}$  or  $0$  or  $\{\}$ )
41.  $|\frac{6-12}{3}| \dots\dots\dots \mathbb{N}$  ( $\notin$  or  $\in$  or  $\not\subset$  or  $\subset$ )
42. In the opposite figure :  
 The distance between the two points A and B =  $\dots\dots\dots$  units.  
  
 $(2$  or  $-2$  or  $1$  or  $3)$
43. If  $x \in \{2, 5, -3\} \cap \{-5, -2, -3\}$ , then  $x = \dots\dots\dots$   
 $(-5$  or  $-3$  or  $-2$  or  $2)$
44.  $(-7) \dots\dots\dots (-|-5|)$  ( $>$  or  $\leq$  or  $=$  or otherwise)
45. The image of the point  $(\dots\dots\dots, \dots\dots\dots)$  by translation  $(x-3, y+4)$  is  $(-5, -3)$  ( $(-8, 15)$  or  $(-2, 7)$  or  $(-8, 7)$  or  $(-2, -7)$ )
46.  $\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$  ( $\emptyset$  or  $\mathbb{N}$  or  $\mathbb{Z}^+$  or  $\{0\}$ )
47.  $(-5) \times |-4| = \dots\dots\dots$  ( $20$  or  $-20$  or  $9$  or  $-9$ )
48.  $\mathbb{Z} = \mathbb{Z}^- \cup \mathbb{Z}^+ \cup \{0\}$
49.  $|-98| \dots\dots\dots \mathbb{Z}^-$  ( $\notin$  or  $\in$  or  $\subset$  or  $\not\subset$ )




50.  $|-98| \dots \mathbb{Z}^-$  ( $\notin$  or  $\in$  or  $\subset$  or  $\not\subset$ )
51. If A (-2, 1) and B (3, 1), then the length  $\overline{AB}$  = ..... length units.  
(0 or 1 or 3 or 5)
52. The integer that lies between -4 and -1 is .....  
(-2 or -5 or 3 or -4)
53. The multiplicative identity element in  $\mathbb{Z}$  is .....  
(-1 or 1 or 0 or 2)
54. If X (3, 8), Y (3, 4), then the length of  $\overline{XY}$  = ..... length units.  
(4 or 6 or 12 or 5)
55. The greatest negative integer is ..... (2 or 1 or 0 or -1)
56. The image of the point (3, 0) by translation of magnitude 3 units in the negative direction of X-axis is .....  
( (3, 3) or (0, 0) or (3, -3) or (0, -3) )
57.  $\mathbb{Z} - \mathbb{Z}^- = \dots$  ( $\mathbb{Z}^-$  or  $\mathbb{Z}^+$  or  $\mathbb{N}$  or {zero} )
58.  $\mathbb{Z}^+ \cup \{0\} = \dots$  ( $\mathbb{Z}$  or  $\mathbb{Z}^-$  or  $\mathbb{N}$  or  $\emptyset$  )
59. The smallest positive number is ..... (1 or -1 or  $\emptyset$  or zero)
60.  $-7 \dots -11$  ( $<$  or  $>$  or  $=$  or  $\leq$ )
61. The integer number just before the number -5 is .....  
(-6 or -4 or 4 or 6)
62. The number of integers between -2 and 2 = ..... (2 or 3 or 4 or 5)
63.  $-2 + 6 = \dots$  (4 or -4 or 8 or -8)
64.  $|-5| + \dots = 0$  (-5 or 5 or 0 or 1)
65. The additive inverse of (-5) is ..... (-10 or 5 or 0 or -5)
66.  $4 + (-6) > \dots$  (2 or 0 or -2 or -4)
67.  $6 \times (-3) = \dots$  (18 or -18 or 9 or -9)
68.  $(-8) + (-4) = \dots$  (2 or -2 or 4 or 32)

## Remember that

- $\mathbb{Z}^+ \subset \mathbb{Z}$  ,  $\mathbb{N} \subset \mathbb{Z}$  ,  $\mathbb{Z}^- \subset \mathbb{Z}$  ,  $\mathbb{C} \subset \mathbb{Z}$  ,  $\mathbb{C} \subset \mathbb{N}$
- zero is neither positive nor negative  
 $0 \notin \mathbb{Z}^-$  ,  $0 \notin \mathbb{Z}^+$  ,  $0 \in \mathbb{Z}$
- The distance between the location of an integer and the location of zero on the number line is called *Absolute value*
- $-(-5) = 5$  ,  $-|-5| = -5$
- if  $a \in \mathbb{Z}$  ,  $b \in \mathbb{Z}$  , then  $a + b \in \mathbb{Z}$  (closure property)
- $-3 + 5 = 5 + (-3)$  (commutative property)
- $-3 + (2 + 4) = (-3 + 2) + 4$  (Associative property)
- $-3 + 0 = -3$  additive identity
- $(-3) + 3 = 0$  additive inverse
- the additive identity is 0
- the multiplicative neutral is 1
- set of non negative is  $\mathbb{N}$
- set of non positive =  $\mathbb{Z}^- \cup \{0\}$
- Smallest positive number is 1
- greatest negative integer number is  $-1$
- greatest non positive integer number is zero
- smallest non negative integer number is zero
- additive inverse  $\rightarrow$  Change the sign ( $8 \rightarrow -8$ ) , ( $-5 \rightarrow 5$ ) , ( $|-7| \rightarrow -7$ )
- $0 \div 5 = 0$  /  $\frac{0}{-3} = 0$  /  $-7 \div 0$  is not defined /  $\frac{2}{0}$  is not defined
- the distance = greater number - smaller number
- image = point + trans
- trans = image - point
- point = image - trans



Answer the following questions:-

1	$Z^+ \cup \dots = N$	$Z = N \cup \dots$
2	$N - Z = \dots$	$Z - N = \dots$
3	$Z^- \cap N = \dots$	$Z - Z^- = \dots$
4	$Z^+ \cap Z^- = \dots$	$Z^+ - Z^- = \dots$
5	$Z = \dots \cup \dots \cup \dots$	$N - Z^+ = \dots$
6	$Z^+ \cup \{0\} = \dots$	$Z \cap N = \dots$
7	$Z^+ \cup N = \dots$	$Z \cap Z^-$
8	The set of integers greater than $-4 = \dots$	
9	if $X = \{x : x \in Z, -3 \leq x \leq -2\}$ then $X = \dots$	
10	The set of odd integers $\cup$ the set of even integers = $\dots$	
11	$8 \times x = -48$ then $x = \dots$	
12	If $a =  -30 $ , $b = -2$ , then $a \div b = \dots$	
13	The distance between the location of an integer and the location of zero on the number line is called $\dots$	
14	If $x =  -6 $ , $y = -2$ , then $2 \times y = \dots$ and $X \div Y = \dots$	
15	$-3x = 27$ then $x = \dots$	
16	$2 - (-3) = \dots$	
17	The additive identity element in $Z$ is $\dots$	
18	the sum of two negative integers is a $\dots$ Integer, while the product of two negative integer is a $\dots$ Integer	
19	$-2 + (\dots + 5) = -2$	
20	$ -5  + \dots = 0$	
21	$-(-6) \times (-3) = \dots$	
22	<p>The length of <math>\overline{AB}</math></p> <p>= <math>\dots</math> length units</p> 	



23	$X = \{x : x \in \mathbb{Z}, -3 < x \leq 2\}$ in listing method = .....	
24	The image of the point $A(-4, 3)$ by translation $(-1, -4)$ is .....	
25	$(4 \times 3 \div 3) - (7 \times 3) = \dots\dots\dots$	
26	If $a = 5, b = -2$ , then $3a + b = \dots\dots\dots$ and $-3 \times (a + b) = \dots\dots\dots$	
27	The point $(a, b)$ its image is $(5, -4)$ by the translation $(2, -3)$ , then the coordinates of the point $(a, b) = \dots\dots\dots$	
28	$\left  \frac{5-8}{3} \right  = \dots\dots\dots$	$(-1, 1, 2, -2)$
29	The result of subtracting $-5$ from $3$ is .....	$(5, 0, -8, 8)$
30	$N \cup Z^- = \dots\dots\dots$	$(Z^+, N, Z, Z^-)$
31	if $zero \in \{5, x - 2\}$ , then $x = \dots\dots\dots$	$(zero, -5, 2, -2)$
32	The additive inverse of the integer $(-17)$ is .....	$(17, 0, -17, otherwise)$
33	$ 9  -  -9  = \dots\dots\dots$	$(-18, 0, 9, -9)$
34	The image of the point $(\dots\dots, \dots\dots)$ by translation $(x, y - 4)$ is $(-3, 0)$	
35	If $A(3, 1), B(-3, 1)$ then $AB = \dots\dots\dots$ units	$(9, -6, 6, 2)$
36	$12 \times \dots\dots\dots = -72$	$(6, -6, 0, 1)$
37	The number of integers between $-1$ and $3 = \dots\dots\dots$	$(-2, -1, 3, -3)$
38	$(-4) \dots\dots\dots  -4 $	$(=, >, <, \geq)$
39	The greatest non positive integer number is .....	$(1, 0, -1, 2)$
40	An integer included between $\frac{-1}{2}$ and $\frac{7}{5}$ is .....	$(-1, -2, 2, zero)$
41	$(-5) \times  -4  = \dots\dots\dots$	$(20, -20, 9, -9)$
42	The greatest non positive integer number is .....	$(1, 0, -1, -2)$
43	If $a \div b = -1$ , then $b = \dots\dots\dots$	$(0, 1, a, -a)$
44	if $a + b = zero$ where $a \neq b$ , then $a \times b \dots\dots\dots zero$	$(=, >, <, \geq)$
45	The image of the point $(-1, 2)$ by translation of magnitude of $3$ units in the positive direction of the $x$ axis is .....	$((-1, 5), (2, 2), (-2, 2))$



46	The set of non negative integer numbers is .....	( $Z^+$ , $Z^-$ , $N$ , $Z$ )
47	if $A(2, 9)$ , $B(-4, 9)$ , then the length of $AB = \dots\dots\dots$ length units	( $-6$ , $2$ , $9$ , $6$ )
48	$4 + (-6) > \dots\dots\dots$	( $2$ , $0$ , $-2$ , $-4$ )
49	Zero $\div (-3) = \dots\dots\dots$	( $\frac{1}{3}$ , $-3$ , $1$ , zero )
50	If $A'(3, -3)$ is the image of $A$ by translation $(x, y) \rightarrow (x - 1, y - 4)$ , then the point $A$ is .....	( ( $2$ , $-7$ ) , ( $4$ , $1$ ) , ( $-4$ , $-1$ ) , ( $2$ , $1$ ) )
51	$\left\{ \frac{2}{3-4} \right\} \dots\dots\dots Z$	( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
52	$Z = N \cup \dots\dots\dots$	( $Z^+$ , $Z^-$ , $\{0\}$ , $\emptyset$ )
53	The multiplicative neutral element in $Z$ is .....	( $0$ , $1$ , $-1$ , $2$ )
54	$[5 + (-3)] \times (-11) = \dots\dots\dots$	( $22$ , $-22$ , $88$ , $-88$ )
55	$\{-1, 4\} \dots\dots\dots N$	( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
56	$-7 - 4 = \dots\dots\dots$	( $-3$ , $-11$ , $11$ , $28$ )
57	$\left  \frac{6-12}{3} \right  \dots\dots\dots N$	( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
58	An integer included between $-1$ , $2$ is .....	( $-1$ , $-2$ , $2$ , $0$ )
59	$\frac{3}{5} \dots\dots\dots Z$	( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
60	The image of the point $(-3, 4)$ by translation $(x, y - 4)$ is .....	( ( $-3$ , $0$ ) , ( $-7$ , $4$ ) , ( $-3$ , $8$ ) , ( $-1$ , $4$ ) )
61	The image of the point $(-3, 2)$ by translation $(x + 1, y)$ is .....	( ( $-2$ , $2$ ) , ( $-2$ , $3$ ) , ( $-2$ , $-2$ ) , ( $2$ , $2$ ) )
62	The smallest non negative integer number is .....	( $1$ , $0$ , $-1$ , $2$ )
63	The number just after $(-19)$ is .....	( $-20$ , $-19$ , $19$ , $-18$ )
64	If $X(-2, 1)$ and $Y(3, 1)$ then $XY = \dots\dots\dots$ Units	( $0$ , $1$ , $3$ , $5$ )
65	The image of the point $(1, -3)$ by translation ( ..... , ..... ) is $(1, 0)$	( ( $1$ , $0$ ) , ( $0$ , $0$ ) , ( $3$ , $0$ ) , ( $0$ , $3$ ) )



66	if $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$ ( 2 , -3 , -5 , 5 )
67	$(-7) \dots\dots\dots (- -5 )$ ( < , > , = )
68	The image of the point ( 4 , 5 ) by translation ( 0 , -4 ) is $\dots\dots\dots$ ( ( 4 , 9 ) , ( 5 , 1 ) , ( 4 , 1 ) , ( 4 , -1 ) )
69	$Z^+ - Z^- = N - \dots\dots\dots$ ( $Z^+$ , $Z^-$ , {0} , C )
70	If $ x  = 6$ then $x = \dots\dots\dots$ ( 6 , -6 , 0 , $\pm 6$ )
71	The smallest natural number is $\dots\dots\dots$ ( 0 , 1 , 2 , 3 )
72	The additive inverse of $ -7 $ is $\dots\dots\dots$ ( 7 , -7 , 0 , $\pm 7$ )
73	$- -54  = \dots\dots\dots$ ( -54 , 54 , 9 , 1 )
74	The greatest negative integer is $\dots\dots\dots$ ( 0 , 1 , -1 , -2 )
75	$-4 > \dots\dots\dots$ ( 4 , -3 , -5 , 0 )
76	$Z^+ \dots\dots\dots N$ ( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
77	$(-10 + 5) + 3 = -10 + (5 + 3)$ is called $\dots\dots\dots$ property ( commutative , associative , additive identity , closure )
78	The additive inverse of zero is $\dots\dots\dots$ ( zero , 1 , -1 , otherwise )
79	Sum of two integer numbers $\dots\dots\dots Z$ ( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
80	$-5 \div 0 = \dots\dots\dots$ ( 5 , -5 , 0 , not defined )
81	The image of the point ( 2 , -1 ) by translation 3 units in the positive direction of y axis is $\dots\dots\dots$ ( ( 2 , 2 ) , ( 5 , -1 ) , ( 2 , -4 ) , ( 5 , 2 ) )
82	$C \cup N = \dots\dots\dots$ ( C , Z , N , $Z^+$ )
83	The smallest positive integer number is $\dots\dots\dots$ ( 0 , 1 , -1 , 2 )
84	$(-2 \times 6) + (-2 \times 9) = -2 \times (6 + 9)$ is called $\dots\dots\dots$ property ( commutative , associative , additive identity , distributive )
85	If $b =  -7 $ , then $b = \dots\dots\dots$ ( -7 , 0 , 7 , $\pm 7$ )
86	$3 \times (-2) = (-2) \times 3$ is called $\dots\dots\dots$ property ( commutative , associative , additive identity , closure )

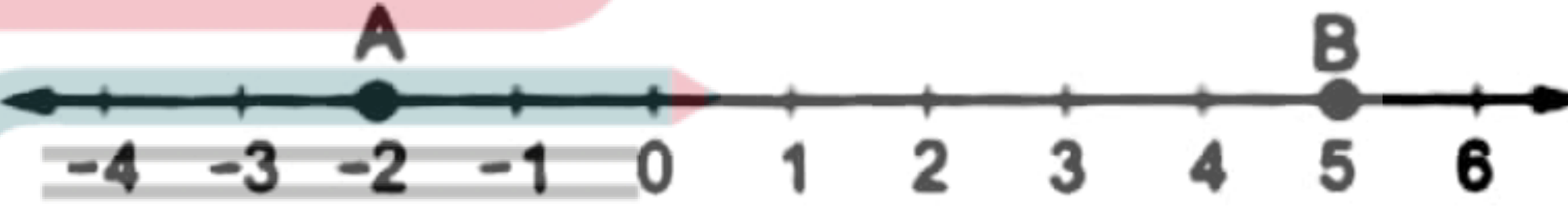


87	$\emptyset$ ..... $\{a, b\}$
88	The image of the point $(-4, 3)$ by translation $(-1, -4)$ is ..... ( $(-5, 7)$ , $(-5, -1)$ , $(-7, 3)$ , $(-3, -1)$ )
89	$ -98 $ ..... $\mathbb{Z}^-$ ( $\in$ or $\subset$ or $\notin$ or $\not\subset$ )
90	The image of point $(3, -2)$ by translation $(4, 2)$ is ..... ( $(7, 0)$ , $(-7, 0)$ , $(-1, 4)$ , $(1, 7)$ )
91	The previous integer of $(-9)$ is ..... ( $-10$ , $8$ , $-8$ , $10$ )
92	The image of the point $(-3, 4)$ by translation of magnitude of 4 units in the negative direction of the y axis is ..... ( $(-3, 0)$ , $(-7, 4)$ , $(-3, 8)$ )
93	$6 + (-6) = 0$ is called ..... property ( additive inverse , associative , additive identity , closure )
94	$5 \times (-3 + 7) = 5 \times (-3) + 5 \times$ ..... ( $35$ , $-3$ , $7$ , $-7$ )
95	The image of the point $(2, 4)$ by translation $(x - 1, y + 1)$ is ..... ( $(3, 3)$ , $(1, 5)$ , $(2, 5)$ , $(1, 4)$ )




1	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$	( $\mathbb{Z}$ or $\mathbb{N}$ or <u><math>\emptyset</math></u> or $\{0\}$ )
2	If $x$ is less than $-5$ , then the symbolic expression is $\dots\dots\dots$	( $x > -5$ or <u><math>x &lt; -5</math></u> or $x \geq 5$ or $x \leq -5$ )
3	$  -65   \dots\dots\dots \mathbb{Z}^-$	( $\in$ or <u><math>\notin</math></u> or $\subset$ or $\not\subset$ )
4	The image of the point $(3, 5)$ by translation $(x + 2, y - 1)$ is $\dots\dots\dots$	( $(5, 6)$ or <u><math>(5, 4)</math></u> or $(1, 4)$ or $(1, 6)$ )
5	$3 \dots\dots\dots -6$	( <u><math>&gt;</math></u> or $<$ or $=$ or $\leq$ )
6	The image of the point $(1, -3)$ by translation ( $\dots\dots\dots$ , $\dots\dots\dots$ ) is $(1, 0)$	( $(1, 0)$ or $(0, 0)$ or $(3, 0)$ or <u><math>(0, 3)</math></u> )
7	The previous integer of $(-9)$ is $\dots\dots\dots$	( <u><math>-10</math></u> or $8$ or $-8$ or $10$ )
8	$7 -   -3   = \dots\dots\dots$	( $21$ or $-10$ or $10$ or <u><math>4</math></u> )
9	The image of the point ( $\dots\dots\dots$ , $\dots\dots\dots$ ) by translation $(x - 3, y + 4)$ is $(-5, -3)$	( $(-8, 15)$ or <u><math>(-2, -7)</math></u> or $(-8, 7)$ or $(-2, 7)$ )
10	$  -6   +   6   = \dots\dots\dots$	( <u><math>12</math></u> or $-12$ or $1$ or $0$ )
11	The greatest negative integer is $\dots\dots\dots$	( $0$ or $1$ or <u><math>-1</math></u> or $2$ )
12	$\mathbb{Z}^+ \dots\dots\dots \mathbb{N}$	( $\in$ or $\notin$ or <u><math>\subset</math></u> or $\not\subset$ )
13	$[5 + (-3)] \times (-11) = \dots\dots\dots$	( $22$ or <u><math>-22</math></u> or $88$ or $-88$ )
14	$-4 > \dots\dots\dots$	( $4$ or $-3$ or <u><math>-5</math></u> or $0$ )
15	$-   -54   = \dots\dots\dots$	( <u><math>-54</math></u> or $54$ or $9$ or $1$ )
16	If $A(-2, 1)$ , $B(3, 1)$ , then $AB = \dots\dots\dots$ units.	<u>5</u>
17	The image of the point $(3, 5)$ by translation $(x + 2, y - 1)$ is $\dots\dots\dots$	<u><math>(5, 4)</math></u>
18	The distance between the location of a number and the location of zero on the number line is called $\dots\dots\dots$	<u>absolute value</u>
19	The additive inverse of zero is $\dots\dots\dots$	<u>0</u>
20	$  -9   + 3 \dots\dots\dots \mathbb{Z}$	( <u><math>\in</math></u> or $\notin$ or $\subset$ or $\not\subset$ )
21	The image of the point $(-4, 3)$ by translation $(-1, -4)$ is $\dots\dots\dots$	( $(-5, -7)$ or <u><math>(-5, -1)</math></u> or $(-7, 3)$ or $(-3, -1)$ )
22	The smallest non-negative integer is $\dots\dots\dots$	( $1$ or <u><math>0</math></u> or $-1$ or $2$ )
23	$\dots\dots\dots$ is the smallest positive integer.	( $-1$ or $0$ or <u><math>1</math></u> or $-10$ )



24	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$	( $\{0\}$ or $\emptyset$ or $\mathbb{Z}$ or zero )
25	The smallest natural number is $\dots\dots\dots$	( <u>0</u> or 1 or 2 or 3 )
26	The additive identity in $\mathbb{N} = \dots\dots\dots$	( <u>zero</u> or 1 or -1 or 2 )
27	The image of the point (4 , -3) by translation ( $x - 3$ , $y + 3$ ) is $\dots\dots\dots$	( (-7 , -6) or <u>(1 , 0)</u> or (0 , 1) or (7 , 6) )
28	If $x = 4$ , $y = -3$ , then the negative number of the following is $\dots\dots\dots$	( $x + y$ or $x - y$ or <u><math>xy</math></u> )
29	$\mathbb{N} \cup \mathbb{Z}^- = \dots\dots\dots$	( $\mathbb{Z}^+$ or $\mathbb{Z}^-$ or <u><math>\mathbb{Z}</math></u> or $\mathbb{N}$ )
30	$ -7  + 3 \dots\dots\dots  -7 + 3 $	( <u>&gt;</u> or = or < or $\leq$ )
31	If $a < b$ , then $-3a \dots\dots\dots -3b$	( < or <u>&gt;</u> or = or $\leq$ )
32	$ -4  -  4  = \dots\dots\dots$	( zero or <u>1</u> or 8 or -8 )
33	$\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$	( $\mathbb{Z}$ or $\mathbb{Z}^+$ or $\{0\}$ or <u><math>\mathbb{N}</math></u> )
34	$ 5 - 11  \dots\dots\dots \mathbb{Z}$	( $\notin$ or <u><math>\in</math></u> or $\subset$ or $\not\subset$ )
35	The image of the point (-3 , 4) by translation ( $x$ , $y - 4$ ) is $\dots\dots\dots$	( <u>(-3 , 0)</u> or (-7 , 4) or (-3 , 8) or (-1 , 4) )
36	On the number line : AB = $\dots\dots\dots$ units	 ( 8 or <u>7</u> or 5 or -2 )
37	$\{0\} \dots\dots\dots \mathbb{N}$	( <u><math>\subset</math></u> or $\not\subset$ or $\in$ or $\notin$ )
38	The image of the point (3 , 0) by translation of magnitude 3 units in the negative direction of x-axis is $\dots\dots\dots$	( (3 , 3) or <u>(0 , 0)</u> or (3 , -3) or (0 , -3) )
39	If X (3 , 8) , Y (3 , 4) , then the length of $\overline{XY} = \dots\dots\dots$ length units.	( <u>4</u> or 6 or 12 or 5 )
40	The image of the point ( $\dots\dots\dots$ , $\dots\dots\dots$ ) by translation ( $x - 3$ , $y + 4$ ) is (-5 , -3)	( (-8 , 1) or <u>(-2 , -7)</u> or (-2 , 7) or (2 , 7) )
41	$ -98  \dots\dots\dots \mathbb{Z}^-$	( <u><math>\notin</math></u> or $\in$ or $\subset$ or $\not\subset$ )
42	The multiplicative identity element in $\mathbb{Z}$ is $\dots\dots\dots$	( -1 or <u>1</u> or 0 or 2 )
43	The integer that lies between -4 and -1 is $\dots\dots\dots$	( <u>-2</u> or -5 or 3 or -4 )



44	If A ( - 2 , 1 ) and B ( 3 , 1 ) , then the length $\overline{AB}$ = ..... length units. ( 0 or 1 or 3 or <u>5</u> )
45	$(-5) \times  4  = \dots\dots\dots$ ( 20 or <u>-20</u> or 9 or -9 )
46	$\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$ ( $\mathbb{Z}^+$ or <u><math>\mathbb{N}</math></u> or $\{0\}$ or $\emptyset$ )
47	$\emptyset \dots\dots\dots \{a, b\}$ ( $\in$ or $\notin$ or <u><math>\subset</math></u> or $\not\subset$ )
48	The image of the point ( - 3 , 4 ) by translation ( 0 , - 4 ) is ( ..... , ..... ) ( <u>( - 3 , 0 )</u> or ( - 7 , 4 ) or ( - 3 , 8 ) or ( - 1 , 4 ) )
49	$\{ - 3 , - \frac{1}{3} \} \dots\dots\dots \mathbb{Z}$ ( $\subset$ or $\in$ or <u><math>\not\subset</math></u> or $\notin$ )
50	The image of the point ( 3 , - 2 ) by translation ( - 3 , 2 ) is ..... ( <u>( 0 , 0 )</u> or ( 3 , 0 ) or ( 2 , 0 ) or ( 6 , 4 ) )
51	The image of the point ( ..... , ..... ) by translation ( $x - 3$ , $y + 4$ ) is ( - 5 , - 3 ) ( <u>( - 8 , 15 )</u> or ( - 2 , 7 ) or ( - 8 , 7 ) or ( - 2 , - 7 ) )
52	$\mathbb{Z} = \mathbb{N} \cup \dots\dots\dots$ ( $\{0\}$ or $\emptyset$ or $\mathbb{Z}^+$ or <u><math>\mathbb{Z}</math></u> )
53	$\{0\} \dots\dots\dots \mathbb{Z}$ ( $\in$ or $\notin$ or <u><math>\subset</math></u> or $\not\subset$ )
54	If $x \in \{2, 5, -3\} \cap \{-5, -2, -3\}$ , then $x = \dots\dots\dots$ ( - 5 or <u>-3</u> or -2 or 2 )
55	$(-7) \dots\dots\dots (- -5 )$ ( $>$ or <u><math>&lt;</math></u> or $=$ or otherwise )
56	In the opposite figure : The distance between the two points A and B = ..... units.  ( <u>2</u> or -2 or 1 or 3 )
57	$ \frac{6-12}{3}  \dots\dots\dots \mathbb{N}$ ( $\notin$ or <u><math>\in</math></u> or $\not\subset$ or $\subset$ )
58	The set of odd numbers $\cap$ the set of even numbers = ..... ( 0 or $\mathbb{N}$ or $\mathbb{Z}$ or <u><math>\emptyset</math></u> )
59	The image of the point ( 4 , - 2 ) by translation two units in the positive direction of the y-axis is ..... ( ( 4 , 2 ) or ( 2 , - 2 ) or ( 6 , - 2 ) or <u>( 4 , 0 )</u> )
60	The set of non-negative integers is ..... ( $\mathbb{C}$ or $\mathbb{Z}$ or $\{0\}$ or <u><math>\mathbb{N}</math></u> )
61	$( -9  + 3) + 2 \dots\dots\dots \mathbb{Z}$ ( <u><math>\in</math></u> or $\notin$ or $\subset$ or $\not\subset$ )
62	$\mathbb{Z} - \mathbb{N} = \dots\dots\dots$ ( $\mathbb{Z}^+$ or $\{0\}$ or <u><math>\mathbb{Z}^-</math></u> or 0 )
63	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$ ( 2 or <u>-3</u> or -5 or 5 )



64	The image of the point A $(-4, 3)$ by translation $(-1, -4)$ is ..... ( $(-5, -7)$ or <u><math>(-5, -1)</math></u> or $(-7, 3)$ or $(-3, -1)$ )
65	$- -6  + 6$ ..... $\mathbb{Z}^+$ ( $\in$ or <u><math>\notin</math></u> or $\subset$ or $\not\subset$ )
66	$\{\frac{2}{3-4}\}$ ..... $\mathbb{Z}$ ( $\in$ or $\notin$ or <u><math>\subset</math></u> or $\not\subset$ )
67	If $0 \in \{5, x-2\}$ , then $x =$ ..... ( zero or $-5$ or <u><math>2</math></u> or $-2$ )
68	An integer between $-1, 2$ is ..... ( $-2$ or $3$ or <u>zero</u> or $-3$ )
69	The set of counting numbers ..... $\mathbb{N}$ ( $\in$ or $\notin$ or <u><math>\subset</math></u> or $\not\subset$ )
70	$ -11 $ ..... $11$ ( $>$ or $<$ or <u><math>=</math></u> or $\leq$ )
71	The integer that lies between $-4$ and $-1$ is ..... ( <u><math>-2</math></u> or $-5$ or $3$ or $-4$ )
72	$3 -  -3  =$ ..... ( <u><math>0</math></u> or $1$ or $3$ or $6$ )
73	$8 + \dots = -2$ ( $6$ or <u><math>-10</math></u> or $10$ or $-6$ )
74	If $m \times 7 = 0$ , then $m =$ ..... ( $1$ or <u><math>0</math></u> or $2$ or $-7$ )
75	The number of integers between $-2$ and $2 =$ ..... ( $2$ or <u><math>3</math></u> or $4$ or $5$ )
76	The integer which comes just before the number $-5$ is ..... ( <u><math>-6</math></u> or $-4$ or $4$ or $6$ )
77	$\mathbb{Z}^+ - \mathbb{Z}^- =$ ..... ( <u><math>\mathbb{Z}^+</math></u> or $\emptyset$ or $\mathbb{N}$ or $\{0\}$ )
78	$\mathbb{Z}^- \cap \mathbb{N} =$ ..... ( $\mathbb{Z}$ or $\mathbb{N}$ or $\mathbb{Z}^-$ or <u><math>\emptyset</math></u> )
79	If $X = -1, Y = 2$ , then the value of $X + Y =$ ..... ( $2$ or $3$ or <u><math>1</math></u> or $-1$ )
80	$4 + (-6) >$ ..... ( $2$ or $0$ or $-2$ or <u><math>-4</math></u> )
81	The additive inverse of $(-5)$ is ..... ( $-10$ or <u><math>5</math></u> or $0$ or $-5$ )
82	$ -5  + \dots = 0$ ( <u><math>-5</math></u> or $5$ or $0$ or $1$ )
83	If $n$ is a negative integer, which of the following is the smallest ? ( $3+n$ or <u><math>3n</math></u> or $\frac{-3}{n}$ or $3-n$ )



- |    |  |
|----|--|
| 84 | If $a + b = \text{zero}$ where $a \neq b$ , then $a \times b$ ..... zero<br>( = or > or <u>&lt;</u> or $\geq$ )  |
| 85 | If $A(3, -3)$ is the image of A by translation $(x, y) \longrightarrow (x - 1, y - 4)$ , then the point A is .....<br>(a) $(2, -7)$ (b) <u><math>(4, 1)</math></u> (c) $(-4, -1)$ (d) $(2, 1)$       |
| 86 | The point $(a, b)$ , its image is $(5, -4)$ by translation $(2, -3)$ , then the coordinates of the point $(a, b) =$ .....<br>(a) <u><math>(3, -1)</math></u> (b) $(9, 3)$ (c) $(-3, 1)$ (d) $(3, 1)$ |



Mr : Mohamed Sherif



# Exercises

[ B ] Choose the correct : -

1	$ -5  = \dots\dots\dots$ A) -5                      B) 5                      C) 10                      D) 0	
2	$ -1  = \dots\dots\dots$ A) -1                      B) 1                      C) 10                      D) 0	
3	$ \frac{5-8}{3}  = \dots\dots\dots$ A) 1                      B) 6                      C) -6                      D) -2	
4	$ \frac{5-11}{3}  = \dots\dots\dots$ A) 1                      B) 2                      C) 3                      D) 4	
5	$ \frac{ -9 +3}{2}  = \dots\dots\dots$ A) 3                      B) 4                      C) 5                      D) 6	
6	$ \frac{ -7 +3}{2}  = \dots\dots\dots$ A) 3                      B) 4                      C) 5                      D) 6	
7	$ -1  \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
8	$ -8  \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
9	$\frac{10}{2} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
10	$\frac{8}{4} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
11	$3 +  -3  = \dots\dots\dots$ A) 0                      B) 6                      C) 3                      D) -3	
12	$7 +  -3  = \dots\dots\dots$ A) 2                      B) 10                      C) 4                      D) -4	



13	$ 5  +  -5  = \dots\dots\dots$ A) 0                      B) 10                      C) 4                      D) 8	
14	$ 7  +  -5  = \dots\dots\dots$ A) 2                      B) 12                      C) 7                      D) 5	
15	$ -5  +  7  = \dots\dots\dots$ A) 12                      B) -12                      C) -2                      D) 2	
16	$-7 \dots\dots\dots - -9 $ A) >                      B) <                      C) =                      D) $\geq$	
17	$(-10) \dots\dots\dots - -10 $ A) >                      B) <                      C) =                      D) $\geq$	
18	If $b =  -5 $ , then $b = \dots\dots\dots$ A) 5                      B) -5                      C) 0                      D) 10	
19	If $b =  -13 $ , then $b = \dots\dots\dots$ A) 13                      B) -13                      C) 0                      D) 26	
20	If $ X  = 4$ , then $X = \dots\dots\dots$ or $\dots\dots\dots$ A) 5, -5                      B) 4, -4                      C) 3, -3                      D) 7, -7	
21	If $ X  = 7$ , then $X = \dots\dots\dots$ or $\dots\dots\dots$ A) 5, -5                      B) 4, -4                      C) 3, -3                      D) 7, -7	
22	$5 \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
23	$-9 \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
24	$\{-2\} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
25	$\{7\} \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
26	$ -2  + 1 \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
27	$ -11  + 5 \dots\dots\dots \mathbb{Z}$ A) $\in$ B) $\notin$ C) $\subset$ D) $\not\subset$	
28	The integer number just before the number - 7 is $\dots\dots\dots$ A) -8                      B) -6                      C) 6                      D) 8	



29	The integer number just before the number $-9$ is ..... A) $-8$ B) $-10$ C) $8$ D) $10$	
30	The integer included between $-5$ and $3$ is ..... A) $0$ B) $5$ C) $-6$ D) $-7$	
31	The integer included between $-5$ and $3$ is ..... A) $4$ B) $5$ C) $-6$ D) $-4$	
32	The number of integers between $-2$ and $2$ is ..... A) $0$ B) $1$ C) $2$ D) $3$	
33	The number of integers between $-2$ and $5$ is ..... A) $4$ B) $5$ C) $6$ D) $7$	
34	The greatest negative integer is ..... A) $0$ B) $1$ C) $-1$ D) Otherwise	
35	The smallest positive integer is ..... A) $0$ B) $1$ C) $-1$ D) Otherwise	
36	The greatest none positive integer is ..... A) $0$ B) $1$ C) $-1$ D) Otherwise	
37	The smallest none negative integer is ..... A) $0$ B) $1$ C) $-1$ D) Otherwise	
38	$ -7  =$ ..... A) $-7$ B) $7$ C) $8$ D) $-8$	
39	$\mathbb{Z}^+ \cup \{0\} \cup \mathbb{Z}^- =$ ..... A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$	
40	$\mathbb{Z} = \mathbb{Z}^+ \cup \{0\} \cup$ ..... A) $\mathbb{Z}^-$ B) $\mathbb{Z}^+$ C) $\mathbb{N}$ D) $\emptyset$	
41	$\mathbb{Z} = \mathbb{Z}^- \cup \{0\} \cup$ ..... A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$	
42	$\mathbb{Z} = \mathbb{Z}^- \cup \mathbb{Z}^+ \cup$ ..... A) $\mathbb{Z}^-$ B) $\{0\}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$	
43	$\mathbb{Z} = \mathbb{Z}^- \cup$ ..... A) $\mathbb{Z}^-$ B) $\{0\}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$	



44	$\mathbb{Z} = \mathbb{N} \cup \dots$ A) $\mathbb{Z}^-$ B) $\{0\}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
45	$\mathbb{Z} = \dots \cup \dots$ A) $\mathbb{Z}^-, \mathbb{Z}^+$ B) $\mathbb{Z}^+, \{0\}$ C) $\mathbb{Z}^+, \mathbb{N}$ D) $\mathbb{N}, \mathbb{Z}^-$
46	$\mathbb{Z} = \mathbb{Z}^+ \cup \dots \cup \dots$ A) $\mathbb{Z}^-, \{0\}$ B) $\mathbb{Z}^+, \{0\}$ C) $\{0\}, \mathbb{N}$ D) $\mathbb{N}, \{0\}$
47	$\mathbb{Z} - \mathbb{Z}^- = \dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
48	$\mathbb{Z} - \mathbb{N} = \dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
49	$\mathbb{Z} - \mathbb{Z}^+ = \dots$ A) $\mathbb{Z}^-$ B) $\{0\} \cup \mathbb{Z}^-$ C) $\mathbb{N}$ D) $\{0\} \cup \mathbb{Z}^+$
50	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots$ A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
51	$\mathbb{Z}^+ \cup \{0\} = \dots$ A) $\mathbb{Z}^-$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
52	$\mathbb{Z}^+ \cup \dots = \mathbb{N}$ A) $\mathbb{Z}^-$ B) $\{0\}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
53	$\mathbb{Z}^- \cup \mathbb{N} = \dots$ A) $\mathbb{Z}$ B) $\emptyset$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
54	$\mathbb{Z}^+ \cup \mathbb{N} = \dots$ A) $\mathbb{Z}^-$ B) $\mathbb{Z}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
55	$\mathbb{Z} \cup \mathbb{N} = \dots$ A) $\mathbb{Z}^-$ B) $\mathbb{Z}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
56	$\mathbb{Z} \cap \mathbb{N} = \dots$ A) $\mathbb{Z}^-$ B) $\mathbb{Z}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$
57	$\mathbb{Z} - \mathbb{N} = \dots$ A) $\mathbb{Z}^-$ B) $\mathbb{Z}$ C) $\mathbb{N}$ D) $\mathbb{Z}^+$



# Exercises

[ B ] Choose the correct : -

1	The additive identity of integer is ..... A) 0                      B) 1                      C) 2                      D) 3	
2	The additive neutral of integer is ..... A) 0                      B) 1                      C) 2                      D) 3	
3	The additive inverse of ( - 5 ) is ..... A) 5                      B) 7                      C) 9                      D) 11	
4	The additive inverse of ( - 7 ) is ..... A) 5                      B) 7                      C) 9                      D) 11	
5	The additive inverse of ( - 9 ) is ..... A) 5                      B) 7                      C) 9                      D) 11	
6	The additive inverse of ( - 11 ) is ..... A) 5                      B) 7                      C) 9                      D) 11	
7	The additive inverse of 2 is ..... A) - 2                      B) - 4                      C) - 6                      D) - 12	
8	The additive inverse of 4 is ..... A) - 2                      B) - 4                      C) - 6                      D) - 12	
9	The additive inverse of 6 is ..... A) - 2                      B) - 4                      C) - 6                      D) - 12	
10	The additive inverse of 10 is ..... A) - 2                      B) - 4                      C) - 6                      D) - 10	
11	The additive inverse of 0 is ..... A) - 2                      B) - 4                      C) 0                      D) - 12	



12	$6 + (-6) = \dots\dots\dots$ A) 0                      B) 12                      C) 6                      D) -6	
13	$5 + (-5) = \dots\dots\dots$ A) 5                      B) 10                      C) 0                      D) -5	
14	$9 + (-9) = \dots\dots\dots$ A) 18                      B) 0                      C) 9                      D) -9	
15	$11 + (-11) = \dots\dots\dots$ A) 11                      B) 22                      C) 0                      D) -22	
16	$-2 + 6 = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4	
17	$-4 + 12 = \dots\dots\dots$ A) 8                      B) 16                      C) -8                      D) -16	
18	$-5 + 15 = \dots\dots\dots$ A) -10                      B) 20                      C) 10                      D) -20	
19	$6 + (-2) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4	
20	$6 + (-10) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4	
21	$3 + (-11) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4	
22	$5 + (-9) = \dots\dots\dots$ A) 4                      B) 8                      C) -8                      D) -4	
23	$-10 + 7 = \dots\dots\dots$ A) 3                      B) 17                      C) -3                      D) -17	



24	$-10 + 2 = \dots\dots\dots$ A) 3                      B) -8                      C) -3                      D) -17	
25	$-10 + 5 = \dots\dots\dots$ A) -5                      B) 17                      C) -3                      D) -17	
26	$-10 + 8 = \dots\dots\dots$ A) 3                      B) 17                      C) -3                      D) -2	
27	$ -5  +  5  = \dots\dots\dots$ A) 0                      B) 10                      C) 25                      D) -10	
28	$ -2  +  2  = \dots\dots\dots$ A) 0                      B) 2                      C) 4                      D) -10	
29	$ -7  +  7  = \dots\dots\dots$ A) 0                      B) 14                      C) 49                      D) -10	
30	$ -8  +  8  = \dots\dots\dots$ A) 0                      B) 64                      C) 16                      D) -10	
31	$ -5  +  7  = \dots\dots\dots$ A) 12                      B) 2                      C) -2                      D) -12	
32	$ -3  +  5  = \dots\dots\dots$ A) 12                      B) 8                      C) -2                      D) -12	
33	$ -1  +  4  = \dots\dots\dots$ A) 12                      B) 2                      C) 5                      D) -12	
34	$ -2  +  6  = \dots\dots\dots$ A) 12                      B) 2                      C) -2                      D) 8	
35	$ -8  - 3 = \dots\dots\dots$ A) 12                      B) 5                      C) -2                      D) -12	



36	$ -1  - 7 = \dots\dots\dots$ A) 6                      B) 8                      C) -6                      D) -8	
37	$ -3  - 5 = \dots\dots\dots$ A) 12                      B) 2                      C) -2                      D) -12	
38	$ -9  - 11 = \dots\dots\dots$ A) 12                      B) -2                      C) 8                      D) -12	
39	$4 + (-6) > \dots\dots\dots$ A) -2                      B) -4                      C) 2                      D) 0	
40	$(-7) + 3 > \dots\dots\dots$ A) -5                      B) -4                      C) 2                      D) 0	
41	$8 + (-6) > \dots\dots\dots$ A) 2                      B) -4                      C) 3                      D) 5	
42	$(-7) + 11 > \dots\dots\dots$ A) 5                      B) 4                      C) 2                      D) 9	
43	$ -5  + \dots\dots\dots = 0$ A) -5                      B) -10                      C) 0                      D) 5	
44	$ -7  + \dots\dots\dots = 0$ A) -7                      B) -14                      C) 0                      D) 7	
45	$\dots\dots\dots +  -3  = 0$ A) -6                      B) -3                      C) 0                      D) 3	
46	$\dots\dots\dots +  -1  = 0$ A) -2                      B) -1                      C) 0                      D) 1	
47	$ -10  + \dots\dots\dots = 0$ A) -5                      B) -10                      C) 0                      D) 5	



# Exercises

## [ A ] : Choose The Correct Answer : -

1	The additive identity in $\mathbb{N}$ = ..... ( zero or 1 or -1 or 2 )	
2	$-7 - 4 =$ ..... ( -3 or -11 or 11 or 28 )	
3	If $a = 3$ , $b = -2$ , then $3ab =$ ..... ( -2 or -12 or -18 or 18 )	
4	$\frac{9}{20} =$ ..... % ( 9 or 18 or 27 or 45 )	
5	$\frac{4}{5} =$ ..... % ( 90 or 80 or 50 or 40 )	
6	$\mathbb{Z} - \mathbb{N} =$ ..... ( {zero} or $\mathbb{Z}^+$ or $\mathbb{Z}^-$ or $\mathbb{Z}$ )	
7	$\mathbb{Z}^+ \cup \{0\} =$ ..... ( $\mathbb{Z}^-$ or $\mathbb{N}$ or $\mathbb{Z}$ )	
8	An integer included between $-2$ , $1$ is ..... ( -2 or -1 or 3 or -3 )	
9	If $n$ is a negative integer number. Which of the following is the smallest ? ( $3+n$ or $3n$ or $\frac{-3}{n}$ or $3-n$ )	
10	$3 -  -3  =$ ..... ( 0 or 1 or 3 or 6 )	
11	$976.2 \div 100 =$ ..... ( 97620 or 9.762 or 97.62 or 0.9762 )	
12	$0 \times (-1) \times (-2) \times (-3) =$ ..... ( -6 or -5 or 6 or 0 )	
13	$\frac{3}{5}$ ..... $\mathbb{Z}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )	
14	If $0 \in \{5, x-3\}$ , then $x =$ ..... ( zero or -5 or 3 or -3 )	
15	$\mathbb{Z}^+ - \mathbb{Z}^- =$ ..... ( $\emptyset$ or $\mathbb{N}$ or $\mathbb{N} - \{0\}$ or $\mathbb{Z}$ )	
16	$P \cap E =$ ..... ( {2} or {3} or {5} or {7} )	
17	If $x = -1$ , $y = 2$ , then the negative number in the following is ..... ( $x^2 + y^2$ or $x+y$ or $x^2 + y$ or $x-y$ )	
18	If $x = -1$ , $y = 2$ , then the value of $x + y =$ ..... ( 2 or 3 or 1 or -1 )	
19	The multiplicative identity in the multiplication of natural numbers , added it to 99 = ..... ( zero or 1 or 99 or 100 )	

20	If $x \times [7 - (-2)] = (-8 \times 9) \times (-1)$ , then the value of $x = \dots\dots\dots$ ( 63 or -63 or -8 or 8 )
21	The smallest prime number is $\dots\dots\dots$ ( zero or 1 or 2 or 3 )
22	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$ ( -3 or 2 or 5 or -5 )
23	$\{0\} \dots\dots\dots \mathbb{N}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
24	$\mathbb{N} \cup \mathbb{Z} = \dots\dots\dots$ ( $\mathbb{Z}$ or $\mathbb{N}$ or $\mathbb{Z}^-$ or $\mathbb{Z}^+$ )
25	If $x = -1$ , $y = -2$ , then the negative number in the following is $\dots\dots\dots$ ( $x + y^2$ or $x^2 + y$ or $x^2 - y$ or $x^2 + y^2$ )
26	If $a + b = \text{zero}$ where $a \neq b$ then $a \times b \dots\dots\dots \text{zero}$ ( $=$ or $>$ or $<$ or $\geq$ )
27	$ -5  + 3 \dots\dots\dots \mathbb{Z}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
28	$ -2  +  2  = \dots\dots\dots$ ( zero or 1 or -4 or 4 )
29	$3 \times 4 + 30 \div 10 = \dots\dots\dots$ ( 15 or 31 or 30 or 21 )
30	The least prime number is $\dots\dots\dots$ ( 1 or 2 or 3 or 5 )
31	$ -9  \dots\dots\dots \mathbb{Z}^+$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
32	$\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$ ( $\mathbb{Z}$ or $\mathbb{Z}^+$ or $\mathbb{N}$ or $\emptyset$ )
33	$\mathbb{N} - \mathbb{Z}^+ = \dots\dots\dots$ ( $\mathbb{Z}$ or $\mathbb{N}$ or $\{0\}$ or $\emptyset$ )
34	If $F$ is an odd number, then the even number in the following is $\dots\dots\dots$ ( $F^2$ or $F^2 + F$ or $2F + 1$ or $F^3$ )
35	If $a < b$ then : $-3a \dots\dots\dots -3b$ ( $<$ or $\leq$ or $=$ or $>$ )
36	$ -9  + 3 \dots\dots\dots \mathbb{Z}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
37	If $x =  -2 $ , $y = -3$ , then $xy = \dots\dots\dots$ ( 5 or -5 or 6 or -6 )
38	$16\% + 0.2 = \dots\dots\dots$ ( 0.18 or 1.8 or 0.36 or 0.32 )
39	$3 \dots\dots\dots \{1, 33, 35\}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
40	$\mathbb{Z} - \mathbb{Z}^- = \dots\dots\dots$ ( $\mathbb{Z}^+$ or $\mathbb{Z}^-$ or $\{0\}$ or $\mathbb{N}$ )
41	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$ ( zero or 1 or -1 or $\emptyset$ )
42	An integer number included between -2 and 3 is $\dots\dots\dots$ ( 3 or -3 or -4 or -1 )



**[ B ] : Complete the Following : -**

1	$\left  \frac{5-11}{3} \right  \dots\dots\dots \mathbb{Z}$
2	$- 2-3  = \dots\dots\dots$
3	$ -17  - 12 = \dots\dots\dots$
4	$5 \times (-4) = \dots\dots\dots$
5	If $x =  -12 $ , $y = -3$ then $x \div y = \dots\dots\dots$
6	$\frac{3}{5} = \dots\dots\dots \%$
7	$\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$
8	The set of counting numbers (C) $\dots\dots\dots \mathbb{N}$
9	The integer number which before zero is $\dots\dots\dots$ and the integer number which after zero is $\dots\dots\dots$
10	The ascending order of the numbers : $(-9)$ , $17$ , $ -9 $ , $-15$ , $16$ is $\dots\dots\dots$
11	$3.75 + 2.5 = \dots\dots\dots \approx \dots\dots\dots$ (Approximate to nearest $\frac{1}{10}$ )
12	$ -5  +  7  = \dots\dots\dots$
13	$(-5) \times  -4  = \dots\dots\dots$
14	The result of : $-4 [3 + (-1)] = \dots\dots\dots$
15	$89.25 \approx \dots\dots\dots$ (to the nearest tenth)
16	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$
17	The set of even numbers (E) – the set of odd numbers (O) = $\dots\dots\dots$

18	A prime number between 1 and 10 is .....
19	If $x$ is an odd number , then $(x + 1)$ is .....
20	The additive identity + the multiplicative identity = .....
21	$ -5  +  7  = \dots\dots\dots$
22	$3.5 \times 1.1 = \dots\dots\dots \approx \dots\dots\dots$ (to the nearest one decimal place)
23	$[9 + (-5)] \times -2 = \dots\dots\dots$
24	If $\frac{5}{9} = \frac{15}{x}$ , then $x = \dots\dots\dots$
25	$\mathbb{Z}^+ \cup \{\text{zero}\} = \dots\dots\dots$
26	$\mathbb{Z} - \mathbb{N} = \dots\dots\dots$
27	The smallest non-negative integer is .....
28	The preceding integer to the number $(x - 1)$ is .....
29	$15 + 17 + (-15) = \dots\dots\dots$
30	$ -2  + 2 = \dots\dots\dots$
31	$(-3) \times (-5) = \dots\dots\dots$
32	$(-5) \times [7 + (-5)] = \dots\dots\dots$
33	$75 = 5 + (7 \times 1) + 7 \times \dots\dots\dots$
34	$ 3  = \dots\dots\dots$
35	The set of even numbers $\cap$ the set of odd numbers = .....
36	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$



- 37  $19 - |-9| = \dots\dots\dots$
- 38  $\frac{\text{The length in the drawing}}{\text{The length in the reality}} = \dots\dots\dots$
- 39  $\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$
- 40 If  $X \subset \{2, -3\} \cap \{5, -3\}$ , then  $X = \dots\dots\dots$
- 41 The descending order of the numbers :  $-9, 2, 5, -12$  is  $\dots\dots\dots$

### [ C ] : Essay Problems :-

- 1 By using the properties of addition in  $\mathbb{Z}$ , find the result of :  
 $-15 + 29 + 15$  (State the property used in each step).
- 2 Use the properties of addition in  $\mathbb{Z}$  to find the result of :  
 $(-17) + 19 + 17$  (State the property used in each step)
- 3 Find the result of :  $63 + 54 + 37 + 46$  (State the used property)
- 4 Use the properties of addition operation in  $\mathbb{Z}$  to find the result of  
 $119 + 191 + (-119)$  (State the property used in each step)
- 5 Use the properties of addition operation in  $\mathbb{Z}$  to find the result of :  
 $125 + (-117) + (-125)$  (State the property used in each step)
- 6 Find the result of :  $6 \times -5 - (2 \times 3) \div 3$
- 7 Find the result of :  $6 \times [(-2) + (-7)]$  (Use the distribution property)
- 8 Find the result of each of the following :  $(-4) \times [(4) + (-5)]$
- 9 Find the result of :  $(5 + |-3|) \times (-11)$
- 10 Use the distributive property of find the result of :  $75 \times 37 + 75 \times 63$

# Homework

**[ A ] : Choose The Correct Answer : -**

1	An integer included between $-2$ , $1$ is .....	( $-2$ or $-1$ or $3$ or $-3$ )
2	$P \cap E =$ .....	( $\{2\}$ or $\{3\}$ or $\{5\}$ or $\{7\}$ )
3	$N \cup Z =$ .....	( $Z$ or $N$ or $Z^-$ or $Z^+$ )
4	$Z \cap N =$ .....	( $Z$ or $Z^+$ or $N$ or $\emptyset$ )
5	$Z - Z^- =$ .....	( $Z^+$ or $Z^-$ or $\{0\}$ or $N$ )
6	$Z^+ \cup \{0\} =$ .....	( $Z^-$ or $N$ or $Z$ )
7	$Z^+ - Z^- =$ .....	( $\emptyset$ or $N$ or $N - \{0\}$ or $Z$ )
8	$\{0\}$ ..... $N$	( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
9	$ -9 $ ..... $Z^+$	( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
10	$3$ ..... $\{1, 33, 35\}$	( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
11	$Z - N =$ .....	( $\{\text{zero}\}$ or $Z^+$ or $Z^-$ or $Z$ )
12	If $\text{zero} \in \{5, x-3\}$ , then $x =$ .....	( $\text{zero}$ or $-5$ or $3$ or $-3$ )
13	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a =$ .....	( $-3$ or $2$ or $5$ or $-5$ )
14	The least prime number is .....	( $1$ or $2$ or $3$ or $5$ )
15	$16\% + 0.2 =$ .....	( $0.18$ or $1.8$ or $0.36$ or $0.32$ )
16	$\frac{4}{5} =$ ..... %	( $90$ or $80$ or $50$ or $40$ )
17	$\frac{3}{5}$ ..... $Z$	( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
18	The smallest prime number is .....	( $\text{zero}$ or $1$ or $2$ or $3$ )
19	$3 \times 4 + 30 \div 10 =$ .....	( $15$ or $31$ or $30$ or $21$ )
20	If $x =  -2 $ , $y = -3$ , then $xy =$ .....	( $5$ or $-5$ or $6$ or $-6$ )
21	$\frac{9}{20} =$ ..... %	( $9$ or $18$ or $27$ or $45$ )
22	$0 \times (-1) \times (-2) \times (-3) =$ .....	( $-6$ or $-5$ or $6$ or $0$ )



23	If $x \times [7 - (-2)] = (-8 \times 9) \times (-1)$ , then the value of $x =$ ..... ( 63 or -63 or -8 or 8 )
24	$ -2  +  2  =$ ..... ( zero or 1 or -4 or 4 )
25	$ -9  + 3$ ..... $\mathbb{Z}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
26	If $a = 3$ , $b = -2$ , then $3ab =$ ..... ( -2 or -12 or -18 or 18 )
27	$976.2 \div 100 =$ ..... ( 97620 or 9.762 or 97.62 or 0.9762 )
28	The multiplicative identity in the multiplication of natural numbers , added it to 99 = ..... ( zero or 1 or 99 or 100 )
29	$ -5  + 3$ ..... $\mathbb{Z}$ ( $\in$ or $\notin$ or $\subset$ or $\not\subset$ )
30	If $a < b$ then : $-3a$ ..... $-3b$ ( $<$ or $\leq$ or $=$ or $>$ )
31	The smallest natural number is ..... ( 0 or 1 or 2 or 3 )
32	$-7 - 4 =$ ..... ( -3 or -11 or 11 or 28 )
33	$3 -  -3  =$ ..... ( 0 or 1 or 3 or 6 )
34	If $x = -1$ , $y = 2$ , then the value of $x + y =$ ..... ( 2 or 3 or 1 or -1 )
35	If $a + b =$ zero where $a \neq b$ then $a \times b$ ..... zero ( = or > or < or $\geq$ )
36	If $F$ is an odd number , then the even number in the following is ..... ( $F^2$ or $F^2 + F$ or $2F + 1$ or $F^3$ )
37	An integer number included between $-2$ and $3$ is ..... ( 3 or -3 or -4 or -1 )
38	If $n$ is a negative integer number. Which of the following is the smallest ? ( $3 + n$ or $3n$ or $\frac{-3}{n}$ or $3 - n$ )
39	If $x = -1$ , $y = 2$ , then the negative number in the following is ..... ( $x^2 + y^2$ or $x + y$ or $x^2 + y$ or $x - y$ )
40	If $x = -1$ , $y = -2$ , then the negative number in the following is ..... ( $x + y^2$ or $x^2 + y$ or $x^2 - y$ or $x^2 + y^2$ )
41	$\mathbb{N} - \mathbb{Z}^+ =$ ..... ( $\mathbb{Z}$ or $\mathbb{N}$ or $\{0\}$ or $\emptyset$ )
42	$\mathbb{Z}^+ \cap \mathbb{Z}^- =$ ..... ( zero or 1 or -1 or $\emptyset$ )



**[ B ] : Complete the Following : -**

1	The set of counting numbers (C) ..... $\mathbb{N}$
2	$\mathbb{Z}^+ \cap \mathbb{Z}^- = \dots\dots\dots$
3	If $\frac{5}{9} = \frac{15}{x}$ , then $x = \dots\dots\dots$
4	$(-5) \times [7 + (-5)] = \dots\dots\dots$
5	$-5 \times [9 + (-4)] = \dots\dots\dots$
6	$\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$
7	$89.25 \approx \dots\dots\dots$ (to the nearest tenth)
8	$[9 + (-5)] \times -2 = \dots\dots\dots$
9	$(-3) \times (-5) = \dots\dots\dots$
10	$19 -  -9  = \dots\dots\dots$
11	$\frac{3}{5} = \dots\dots\dots \%$
12	The result of : $-4 [3 + (-1)] = \dots\dots\dots$
13	$3.5 \times 1.1 = \dots\dots\dots = \dots\dots\dots$ (to the nearest one decimal place)
14	$ -2  + 2 = \dots\dots\dots$
15	$1 - 0.567 = \dots\dots\dots$
16	The descending order of the numbers : $-9, 2, 5, -12$ is .....
17	If $x =  -12 $ , $y = -3$ then $x \div y = \dots\dots\dots$
18	$(-5) \times  -4  = \dots\dots\dots$



19	$ -5  +  7  = \dots\dots\dots$
20	$15 + 17 + (-15) = \dots\dots\dots$
21	The natural number just next to the natural number $(x + 1)$ is $\dots\dots\dots$
22	The smallest positive integer number is $\dots\dots\dots$ and the greatest negative integer number is $\dots\dots\dots$
23	$5 \times (-4) = \dots\dots\dots$
24	$ -5  +  7  = \dots\dots\dots$
25	The additive identity + the multiplicative identity = $\dots\dots\dots$
26	The preceding integer to the number $(x - 1)$ is $\dots\dots\dots$
27	If $a \in \{2, -5, -3\} \cap \{5, -2, -3\}$ , then $a = \dots\dots\dots$
28	If $X \subset \{2, -3\} \cap \{5, -3\}$ , then $X = \dots\dots\dots$
29	$ -17  - 12 = \dots\dots\dots$
30	$3.75 + 2.5 = \dots\dots\dots$ (Approximate to nearest $\frac{1}{10}$ )
31	If $x$ is an odd number, then $(x + 1)$ is $\dots\dots\dots$
32	The smallest non-negative integer is $\dots\dots\dots$
33	The set of even numbers $\cap$ the set of odd numbers = $\dots\dots\dots$
34	$\mathbb{Z} \cap \mathbb{N} = \dots\dots\dots$
35	$- 2 - 3  = \dots\dots\dots$
36	The ascending order of the numbers : $(-9), 17,  -9 , -15, 16$ is $\dots\dots\dots$

37 A prime number between 1 and 10 is .....

38  $\mathbb{Z} - \mathbb{N} = \dots\dots\dots$

39  $75 = 5 + (7 \times 1) + 7 \times \dots\dots\dots$

40 If  $a = 3$  ,  $b = -2$  , then the value of :  $3a + b = \dots\dots\dots$

### [ C ] : Essay Problems : -

1 By using the properties of addition in  $\mathbb{Z}$  , find the result of :  
 $-15 + 29 + 15$  (State the property used in each step).

2 Find the result of each of the following :  $(-4) \times [(4) + (-5)]$

3 Find the result of :  $6 \times [(-2) + (-7)]$  (Use the distributive property)

4 Find the result of :  $6 \times -5 - (2 \times 3) \div 3$

5 Use the properties of addition operation in  $\mathbb{Z}$  to find the result of :  
 $125 + (-117) + (-125)$  (State the property used in each step)

6 Use the properties of addition operation in  $\mathbb{Z}$  to find the result of  
 $119 + 191 + (-119)$  (State the property used in each step)

7 Find the result of :  $63 + 54 + 37 + 46$  (State the used property)

8 Use the properties of addition in  $\mathbb{Z}$  to find the result of :  
 $(-17) + 19 + 17$  (State the property used in each step)

9 Use the distributive property of find the result of :  $75 \times 37 + 75 \times 63$

10 Find the result of :  $(5 + |-3|) \times (-11)$



# Exercises

[ B ] Choose the correct : -

1	If A ( 2 , 2 ) and B ( 3 , 2 ) , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4	
2	If A ( 0 , 1 ) and B ( 0 , 3 ) , then AB = ..... units. A) 1                      B) 2                      C) 3                      D) 4	
3	If A ( 2 , 2 ) and B ( 5 , 2 ) , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4	
4	If A ( 0 , 1 ) and B ( 0 , 5 ) , then AB = ..... units. A) 1                      B) 2                      C) 3                      D) 4	
5	If A ( - 2 , 2 ) and B ( - 3 , 2 ) , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4	
6	If A ( 0 , - 1 ) and B ( 0 , - 3 ) , then AB = ..... units. A) 1                      B) 2                      C) 3                      D) 4	
7	If A ( - 2 , 2 ) and B ( - 5 , 2 ) , then AB = ..... Length units. A) 1                      B) 2                      C) 3                      D) 4	
8	If A ( 0 , - 1 ) and B ( 0 , - 5 ) , then AB = ..... units. A) 1                      B) 2                      C) 3                      D) 4	
9	If A ( - 2 , 2 ) and B ( 1 , 2 ) , then AB = ..... Length units. A) 3                      B) 4                      C) 5                      D) 6	
10	If A ( 0 , - 1 ) and B ( 0 , 3 ) , then AB = ..... units. A) 3                      B) 4                      C) 5                      D) 6	
11	If A ( - 2 , 2 ) and B ( 3 , 2 ) , then AB = ..... Length units. A) 3                      B) 4                      C) 5                      D) 6	



12	If A ( 0 , - 1 ) and B ( 0 , 5 ) , then AB = ..... units. A) 3                      B) 4                      C) 5                      D) 6	
13	The image of the point ( 2 , 0 ) by the translation ( 1 , 2 ) is ..... A) ( 3 , 2 )              B) ( 4 , 3 )              C) ( 5 , 4 )              D) ( 6 , 5 )	
14	The image of the point ( 3 , 1 ) by the translation ( 1 , 2 ) is ..... A) ( 3 , 2 )              B) ( 4 , 3 )              C) ( 5 , 4 )              D) ( 6 , 5 )	
15	The image of the point ( 4 , 2 ) by the translation ( 1 , 2 ) is ..... A) ( 3 , 2 )              B) ( 4 , 3 )              C) ( 5 , 4 )              D) ( 6 , 5 )	
16	The image of the point ( 5 , 3 ) by the translation ( 1 , 2 ) is ..... A) ( 3 , 2 )              B) ( 4 , 3 )              C) ( 5 , 4 )              D) ( 6 , 5 )	
17	The image of ( 5 , 1 ) by translation ( - 1 , 2 ) is ..... A) ( 4 , 3 )              B) ( 3 , 4 )              C) ( 2 , 5 )              D) ( 1 , 6 )	
18	The image of ( 4 , 2 ) by translation ( - 1 , 2 ) is ..... A) ( 4 , 3 )              B) ( 3 , 4 )              C) ( 2 , 5 )              D) ( 1 , 6 )	
19	The image of ( 3 , 3 ) by translation ( - 1 , 2 ) is ..... A) ( 4 , 3 )              B) ( 3 , 4 )              C) ( 2 , 5 )              D) ( 1 , 6 )	
20	The image of ( 2 , 4 ) by translation ( - 1 , 2 ) is ..... A) ( 4 , 3 )              B) ( 3 , 4 )              C) ( 2 , 5 )              D) ( 1 , 6 )	
21	The image of ( 5 , 4 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , 2 )              B) ( 3 , 1 )              C) ( 2 , 0 )              D) ( 1 , - 1 )	
22	The image of ( 4 , 3 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , 2 )              B) ( 3 , 1 )              C) ( 2 , 0 )              D) ( 1 , - 1 )	
23	The image of ( 3 , 2 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , 2 )              B) ( 3 , 1 )              C) ( 2 , 0 )              D) ( 1 , - 1 )	
24	The image of ( 2 , 1 ) by translation ( - 1 , - 2 ) is .....	



	A) ( 4 , 2 )      B) ( 3 , 1 )      C) ( 2 , 0 )      D) ( 1 , - 1 )	
25	The image of ( 5 , - 1 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , - 3 )      B) ( 3 , - 4 )      C) ( 2 , - 5 )      D) ( 1 , - 6 )	
26	The image of ( 4 , - 2 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , - 3 )      B) ( 3 , - 4 )      C) ( 2 , - 5 )      D) ( 1 , - 6 )	
27	The image of ( 3 , - 3 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , - 3 )      B) ( 3 , - 4 )      C) ( 2 , - 5 )      D) ( 1 , - 6 )	
28	The image of ( 2 , - 4 ) by translation ( - 1 , - 2 ) is ..... A) ( 4 , - 3 )      B) ( 3 , - 4 )      C) ( 2 , - 5 )      D) ( 1 , - 6 )	
29	The image of ( - 2 , - 1 ) by translation ( - 1 , - 2 ) is ..... A) ( - 3 , - 3 )      B) ( - 4 , - 4 )      C) ( - 5 , - 5 )      D) ( - 6 , - 6 )	
30	The image of ( - 3 , - 2 ) by translation ( - 1 , - 2 ) is ..... A) ( - 3 , - 3 )      B) ( - 4 , - 4 )      C) ( - 5 , - 5 )      D) ( - 6 , - 6 )	
31	The image of ( - 4 , - 3 ) by translation ( - 1 , - 2 ) is ..... A) ( - 3 , - 3 )      B) ( - 4 , - 4 )      C) ( - 5 , - 5 )      D) ( - 6 , - 6 )	
32	The image of ( - 5 , - 4 ) by translation ( - 1 , - 2 ) is ..... A) ( - 3 , - 3 )      B) ( - 4 , - 4 )      C) ( - 5 , - 5 )      D) ( - 6 , - 6 )	
33	The image of ( 2 , 0 ) by translation ( X + 1 , y + 2 ) is ..... A) ( 3 , 2 )      B) ( 4 , 3 )      C) ( 5 , 4 )      D) ( 6 , 5 )	
34	The image of ( 3 , 1 ) by translation ( X + 1 , y + 2 ) is ..... A) ( 3 , 2 )      B) ( 4 , 3 )      C) ( 5 , 4 )      D) ( 6 , 5 )	
35	The image of ( 4 , 2 ) by translation ( X + 1 , y + 2 ) is ..... A) ( 3 , 2 )      B) ( 4 , 3 )      C) ( 5 , 4 )      D) ( 6 , 5 )	
36	The image of ( 5 , 3 ) by translation ( X + 1 , y + 2 ) is ..... A) ( 3 , 2 )      B) ( 4 , 3 )      C) ( 5 , 4 )      D) ( 6 , 5 )	



37	The image of $(5, 1)$ by translation $(X - 1, y + 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$	
38	The image of $(4, 2)$ by translation $(X - 1, y + 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$	
39	The image of $(3, 3)$ by translation $(X - 1, y + 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$	
40	The image of $(2, 4)$ by translation $(X - 1, y + 2)$ is ..... A) $(4, 3)$ B) $(3, 4)$ C) $(2, 5)$ D) $(1, 6)$	
41	The image of $(5, 4)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$	
42	The image of $(4, 3)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$	
43	The image of $(3, 2)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$	
44	The image of $(2, 1)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, 2)$ B) $(3, 1)$ C) $(2, 0)$ D) $(1, -1)$	
45	The image of $(5, -1)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$	
46	The image of $(4, -2)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$	
47	The image of $(3, -3)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$	
48	The image of $(2, -4)$ by translation $(X - 1, y - 2)$ is ..... A) $(4, -3)$ B) $(3, -4)$ C) $(2, -5)$ D) $(1, -6)$	



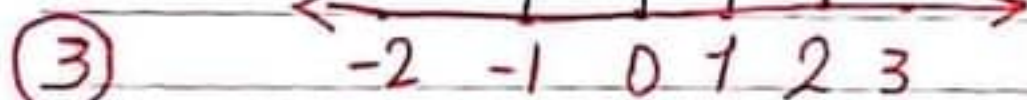
# Final Revision for Math Grade Six

Choose the Correct Answer

①  $\mathbb{Z} - \mathbb{N} = \dots$  ( $\mathbb{Z} \not\subset \{0\} \subset \mathbb{Z} \not\subset \mathbb{N}$ )

② an integer numbers between  $-2$  &  $3$  is

( $-3 \not\subset -2 \subset -1 \not\subset 3$ )



when  $x + 2 = |-4|$   $\therefore x = \dots$

sol $\rightarrow$  ( $-6 \not\subset -2 \subset 2 \not\subset 6$ )

$x + 2 = 4 \quad \therefore x = 4 - 2 \quad \therefore x = 2$

④  $|-19| + 3 \dots \mathbb{Z}$  ( $\mathbb{E} \not\subset \mathbb{C} \subset \mathbb{C}$ )

$\swarrow$   
 $19 + 3 = 22$

$\mathbb{Z}$  ( $\mathbb{E} \not\subset \mathbb{C} \subset \mathbb{C}$ )



⑤ when  $x \subset \{-3, 2\} \cap \{5, -3\} \therefore x = \dots$

Sol  $\rightarrow (\{2\} \subset \{-3\} \subset \{-5\} \subset \{5\})$

①  $\rightarrow$  means Common elements in the two sets

Sol  $\rightarrow \{-3\}$

⑥  $4 \times -2 = -8 \therefore (-8) \subset 8 \subset 2 \subset -2$

not  $\rightarrow + \times - = -$

⑦  $\{10\} \subset \mathbb{Z} \quad (\in \subset \subset \subset \subset)$

⑧  $\mathbb{R} \subset \mathbb{Q} \therefore (-3) = \dots (1/3 \subset -3 \subset 1 \subset 0)$

⑨  $\frac{5}{7-12} = \dots \mathbb{Z} \quad (\in \subset \subset \subset \subset)$

"Sol"

~~$\{1/2\} \subset \mathbb{Z}$~~   $\frac{5}{-5} = -1 \in \mathbb{Z}$

⑩  $\{-3 \subset -1/2\} \subset \mathbb{Z} \quad (\in \subset \subset \subset \subset)$   
 Sol  $\therefore \{-1/2\} \not\subset \mathbb{Z}$



DATE \_\_\_\_\_  
PAGE \_\_\_\_\_  
Subtract -3 from 5 is \_\_\_\_\_

when  $A = 4$  &  $B = -2$  &  $C = |-2|$

$$\therefore (A+B) \times C = \_\_\_\_\_\_$$

The image of point  $(2, 5)$  by translate  
 $(-2, -5)$  is \_\_\_\_\_

The image of point  $(3, -1)$  by translate  
 $(x-2, y)$  is \_\_\_\_\_

The image of point  $(a, b)$  by translate  
 $(1, 2)$  is  $(3, -2)$

$$\therefore (a, b) = \_\_\_\_\_\_$$

3.8

E, even numbers

The only even prime number is ~~2~~ 2

-14 > -16

natural number between 16-4 is 0

(1, 0, 3, 4)

number of ~~natur~~ integer numbers between -2 & 3  
is (3, 4, 5, 2)

Sol  $\rightarrow$  ~~2~~ 16 - 16 0 16 2 // their number 4  
greatest integer negative number is -1

(-1 6 - 2 6 - 3 6 otherwise)

smallest integer positive number 1

(0 6 1 6 - 1 6 otherwise)



DATE \_\_\_\_\_  
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⑪  $\frac{-5}{-5} = 1 \in \mathbb{N}$  ( $\in \notin \subset \supset$ )  
 $\swarrow$   
 $5 \in \mathbb{N}$

⑫  $\frac{5-5}{7} = 0 \notin \mathbb{Z}^+$  ( $\in \notin \subset \supset$ )

$\frac{0}{7} = 0$  because 0 not positive  
and not negative

⑬  $-|-6| < 8$  ( $< > =$ )  
 $\Downarrow$   
 Sol  $-6 < 8$

⑭  $|5| - |-5| > (-5)$  ( $> < =$ )  
 $\swarrow \quad \searrow$   
 Sol  $5 - 5 = \text{zero} > -5$

$27 \div (-3) = -9$  ( $-9 \in \mathbb{Z}$ )

$\oplus \div \ominus = \ominus \therefore -9$

when  $|x| = 3 \therefore x = (3, -3, \oplus 3)$

$\swarrow$   
 $\pm x = 3$

when  $|-4| = x \therefore x = (4, -4, \pm 4)$   
 $\swarrow$   
 $4 = x$

$|-5| + |7| = 12$  ( $-2 \in \mathbb{Z}$ )

$\swarrow$   
 $5 + 7 = 12$



Subtract negative 2 from 4 is -6

$$4 - (-2) = 4 + 2 = 6$$

(6, 2, 4)

5 exceeds -3 by -8

$$5 - (-3) = 5 + 3 = 8$$

(5, 8, 2)

when A is additive inverse of B

$$A + B = 0$$

number + its inverse = ~~zero~~

(2, 1, 0)

Additive identity in  $\mathbb{Z}$  +

multiplicative identity = 1

$$0 + 1 = 1$$

(1, 0, -1, 2)



The image of point  $(-1, 2)$  by translation  $(3, 5)$  is  $(2, 7)$ .

$$(-1, 2) \xrightarrow{(3, 5)} = (-1+3, 2+5)$$

image =  $(2, 7)$

The point  $(a, b)$  its image  $(5, -4)$  by translation  $(2, -3) \Rightarrow (a, b) = (3, -1)$ ...

$\text{point} = \text{image} - \text{translate}$

 imp

$$\begin{aligned}(a, b) &= (5, -4) - (2, -3) \\ &= (5-2, -4-(-3)) \\ &= (3, -4+3) = (3, -1)\end{aligned}$$

The image of  $(-4, 3)$  by translation  $(x, y-1)$  is  $(-4, 2)$ ...

$$(-4, 3) \xrightarrow{(x, y-1)} (-4, 3-1)$$

$(-4, 2)$

The image of point  $(3, -5)$  by translate 4 units in positive part in x axis



is  $(7, -5)$

$$\begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 3 \\ -5 \end{pmatrix} \xrightarrow[\text{in positive } x]{\text{translate } 4} \begin{pmatrix} 7 \\ -5 \end{pmatrix}$$

$$(3+4, -5)$$

The image of  $(2, -5)$  by translate  $(x-3, y+2)$  is  $(-1, -3)$ .

$$\begin{pmatrix} 2 \\ -5 \end{pmatrix} \xrightarrow{(x-3, y+2)} \begin{pmatrix} 2-3 \\ -5+2 \end{pmatrix} = \begin{pmatrix} -1 \\ -3 \end{pmatrix}$$

The image of  $(4, -1)$  by translate  $(-4, 1)$  is  $(0, 0)$ .

$$\begin{pmatrix} 4 \\ -1 \end{pmatrix} \xrightarrow{(-4, 1)} \begin{pmatrix} 4-4 \\ -1+1 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix}$$

The image of  $(3, 5)$  by translate 5 units in negative direction of y axis is  $(3, 0)$ .

$$\begin{pmatrix} 3 \\ 5 \end{pmatrix} \xrightarrow[\text{negative in } y]{\text{translate } 5} \begin{pmatrix} 3 \\ 5-5 \end{pmatrix} = \begin{pmatrix} 3 \\ 0 \end{pmatrix}$$

negative put  $\ominus$  for 5  $\rightarrow -5$



The distance between  $(5, 2)$  and  $y$  axis is \_\_\_\_\_.

(Not) The distance between  $(a, b)$  and  $x$  axis =  $b$  and  $y$  axis =  $a$

$$(8, -5) \text{ sol } = 5 \quad (5, -2) =$$

The point  $(3, -2)$ , The distance between

It and  $x$  axis =  $2$

$$|-2| = 2$$

when  $(x, 7)$  the distance between

It and  $y$  axis =  $3 \therefore x = \pm 3$

$$|x| = 3 \therefore x = \pm 3$$

when  $L = (-1, -2)$  and  $M = (-1, 3)$

$\therefore$  length  $LM = 5$

$$|3 - (-2)| = 5$$

The point  $(-2, 4)$  is image of  $(2, -4)$  by translate . . . .

$$\boxed{\text{translate} = \text{image} - \text{point}}$$

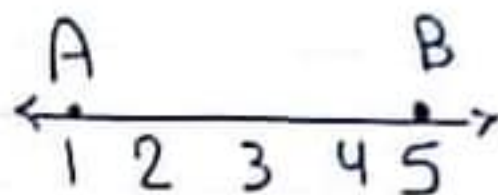
$$\text{translate} = (2, -4) - (-2, 4)$$

$$= (2 - (-2), -4 - 4) = (4, -8)$$

look at figure:-

$$\text{length } AB = 4$$

$$|B - A| = |5 - 1|$$



$$= |4| = 4$$

$$\text{length } AB = 4$$

$$|B - A| = |2 - (-2)| = |2 + 2|$$



The length between  $(3, 2)$  and  $(1, 2) =$

$$(3, 2) \text{ and } (1, 2)$$

$$\therefore |3 - 1| = |2| = 2$$

The length between  $A(7, 2)$  and  $B(3, 2)$

$$AB = |B - A| = |3 - 7| = |-4| = 4$$



$$\left( \left| \frac{2}{3} \right| - \left| \frac{-1}{3} \right| \right) \in \mathbb{Z}$$

$$\frac{2}{3} - \frac{1}{3} = \frac{1}{3} \notin \mathbb{Z} \quad (\in \mathbb{Q} \setminus \mathbb{Z} \subset \mathbb{Q})$$

$$\left( \left| -\frac{2}{3} \right| + \left| \frac{-1}{3} \right| \right) \in \mathbb{Z}$$

$$\frac{2}{3} + \frac{1}{3} = \frac{3}{3} = 1 \in \mathbb{Z}$$

when  $x = |-2|$  &  $y = -3$   $\therefore xy = -6$

$$x = 2$$

$$= x \times y \quad \text{means} \\ = 2 \times (-3) \\ = -6$$

when  $x = 2 + |-5|$   $\therefore x = 7$

$$x = 2 + 5 = 7$$

$$p \cap E = \{2\}$$

$p \rightarrow$  prime numbers

try by your self

integer number between -265 is \_\_\_\_\_

$$|-20| = \underline{\quad\quad\quad} \mathbb{Z}^-$$

when  $x \in \{1, -2\} \cap \{4, -2\}$

$$\therefore x = \underline{\quad\quad\quad}$$

additive inverse of  $|-5|$  is \_\_\_\_\_

$$-20 \times x = 100$$

$$\therefore x = \underline{\quad\quad\quad}$$

$$zero \div |-2| = \underline{\quad\quad\quad}$$

$$\mathbb{Z} \cap \mathbb{Z}^+ = \underline{\quad\quad\quad}$$

$$\mathbb{N} - \mathbb{Z} = \underline{\quad\quad\quad}$$



$$|-2|$$

N

$$-(-4)$$

$$|4|$$

$$\text{when } |x| = 7$$

$$\therefore x =$$

$$\text{when } |-3| = x$$

$$\therefore x =$$

$$|-12| - |12| =$$

$$\text{when } x = -5 \text{ \& } y = |-4| \therefore xy =$$

$$-12 >$$

integer numbers between -1, 2 is

Smallest positive integer + greatest negative integer =

$$-8 \div (-4) = +2$$

$$\text{sol } \ominus \div \ominus = \oplus \quad (2, 4, 8)$$

$$\text{when } x = |-4| \text{ and } y = -2 \therefore x/y = -2$$

$$\text{sol } x = 4 \text{ \& } y = -2 \quad \left| \begin{array}{l} \frac{4}{-2} = -2 \\ (-2, 4, 8) \end{array} \right.$$

$$\text{Zero} \times (-2) \times (-3) \times |-5| = \text{---} 0 \text{---}$$

$$\text{sol } \text{Zero} \times \text{any number} = \text{Zero}$$

$$\text{when } a = 3 \text{ \& } b = -2 \therefore 3ab = \text{---} -18 \text{---}$$

$$\text{sol } 3 \times 3 \times (-2) = 9 \times -2 = -18$$

$$(-18, 18, 6)$$

$$[8 + (-4)] \times -5 = -20$$

$$\text{sol } [8 - 4] \times -5$$

$$4 \times -5 = -20$$

$$(20, -20, 60)$$

$$5 \times |x| = 15 \therefore x = \pm 3$$

$$\text{sol } \therefore |x| = \frac{15}{5} \quad (-3, 3, +3)$$

$$|x| = 3$$

$$\pm x = 3$$



$$15 + 8 - 15 = \underline{\underline{8}}$$

Sol  $\rightarrow$  ~~15~~ + 8 - ~~15~~ = 8 e the number and additive inverse <sup>its</sup> (-5) is -5

$$-5 + 5 = \underline{\underline{Zero}}$$

$$|-5| + \underline{\underline{-5}} = \underline{\underline{Zero}}$$

Sol  $\rightarrow$  5 + (-5) = 0

subtract nine from -7 is

Sol  $\rightarrow$  -7 - 9 = -16

Not

From  $\left\{ \begin{array}{l} \text{decrease} \end{array} \right.$   $\text{scnd} - \text{first}$

$\left\{ \begin{array}{l} \text{exceed} \\ \text{increase} \end{array} \right.$   $\text{first} - \text{scnd}$

when  $a = 2$  &  $b = -5$  &  $c = -1$

$$\therefore a + b + c = \underline{\quad -4 \quad}$$

Sol  $\rightarrow 2 + (-5) + (-1)$  (4, -4, 8, 3)

$$2 - 5 - 1 = -2 - 1 = -3$$

$$(-6) \times (-2) = \underline{\quad -12 \quad}$$

Sol  $\rightarrow 6 \times -2 = -12$  (12, -12, 6)

Sol  $\rightarrow a \times 0 = 0$  (0, a, -a)

$$[5 \times -7] \times 8 = 5 \times [-7 \times 8]$$

Sol, the multiplication is associative in  $\mathbb{Z}$  (0, 8, -7, 5)

Let  $a$  is additive identity and  $b$  is multiplicative identity in  $\mathbb{Z}$

$$\therefore a \times b = \underline{\quad 0 \quad}$$

$$0 \times 1 = 0$$
 (0, 1, -1)



additive inverse for  $|-3|$  is

additive invs  $\xrightarrow{\swarrow} 3 = -3$

$$(35 \div 5) \div (-7) =$$

$$7 \div -7 = -1$$

Complement  $\bar{Z}$  respect to  $Z$ .

sol  $\bar{Z} \cup N = Z$  <sup>N</sup>

The number of All integer numbers

between  $(-161) = 1$

Zero : 1 + number 1

$$\frac{|x|}{2} = 3 \quad \therefore x = \pm 6$$

$$|x| = 6$$

$$\swarrow \pm x = 6$$

$$Z = N \cup \dots \quad (Z^+ \cup \underbrace{Z^-}_{\text{otherwise}} \cup \{0\})$$

$$Z^+ \cap Z^- = \dots \quad (Z^+ \cup \underbrace{\emptyset}_{\text{otherwise}} \cup Z^-)$$

$$\cancel{Z^+ \cup Z^-} = Z^+ \cup Z^- = Z$$

$$(N \cup Z^- \cup Z^+ \cup \underbrace{Z}_{\text{otherwise}})$$

Not

$$Z \cap N = N$$

~~imp~~

$$Z \cup N = Z$$

$$Z - N = Z^-$$

$$-N = Z^+ \cup \{0\}$$

$$Z - Z^- = N$$

13

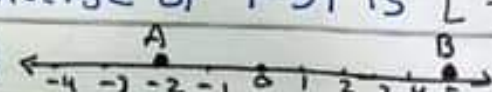
z

$$(E \cup \underbrace{\emptyset}_{\text{otherwise}} \cup \emptyset)$$

5

8.8



- 1 The Image of The point  $(-3, 4)$  by translation  $(x, y-4)$   $[(-3, 0), (-7, 4)]$
- 2  $\mathbb{Z}^+ \cap \mathbb{Z}^-$   $[\emptyset, \mathbb{N}, \mathbb{N}-\{0\}, \mathbb{Z}]$
- 3 An integer number included between  $-2$  and  $3$   $[3, -3, -4, -1]$
- 4  $\mathbb{Z} - \mathbb{N}$   $[\mathbb{Z}^+, \{0\}, \mathbb{Z}^-, \text{zero}]$
- 5 The additive identity in  $\mathbb{N}$  is  $[1, -1, 0, 2]$
- 6 image of point  $(-4, 3)$  by translation  $(-1, -4)$   $[(-5, -1), (3, 1), (2, 0)]$
- 7  $|\frac{5-11}{3}| \geq$   $[\in, \notin, <, \neq]$
- 8 The distance between two Point  $(3, 5)$   $(7, 5)$   $[1 \text{ unit}, 3 \text{ unit}, 4 \text{ unit}]$
- 9 The smallest positive integer  $[-1, 0, 1, 2]$
- 10 The greatest negative integer  $[-1, 0, 1, 2]$
- 11 Zero  $\square \mathbb{Z}^+$   $[\{1, -2\} \square \mathbb{N} \mid | -65 | \square \mathbb{Z}^-]$
- 12  $\mathbb{Z}^+ \cup \{0\} \cup \mathbb{Z}^- =$   $[\mathbb{N}, \mathbb{Z}^+, \mathbb{Z}^-, \mathbb{Z}]$
- 13  $|\frac{1}{3}| - |\frac{-1}{3}| = \square \mathbb{Z}$   $[\in, \notin, <, \neq]$
- 14  $\mathbb{N} \cup \mathbb{Z}^-$   $[\mathbb{Z}^-, \mathbb{Z}^+, \mathbb{Z}, \mathbb{N}]$
- 15 The number  $---$  is neither positive nor negative  $[-1, 0, 1, 2]$
- 16 The smallest non negative integers  $[-1, 0, 1, 2]$
- 17 The integers which comes just before  $-5$   $[-6, -4, -3, 5]$
- 18 The number of integers between  $-2$  and  $2$   $[2, 3, 4, 5]$
- 19  $3 - | -3 | =$   $[0, 1, 3, 6] \mid | -5 | + \text{---} = 0$   $[-5, 5, 0, 1]$
- 20 The additive inverse of  $-5$  is  $[-10, 5, 0, -5]$
- 21 The multiplicative natural element  $[-1, 0, 1, 2]$
- 22 The product of Two negative integers  $[\text{Positive}, \text{negative}]$
- 23 if  $x = | -2 |$ ,  $y = -3$ , then  $xy =$   $[-5, 5, 6, -6]$
- 24 The largest non positive integers  $[-1, 0, 1, 2]$
- 25 The additive Inverse of  $| -5 |$  is  $[-10, 5, 0, -5]$
- 26 The length of  $\overline{AB}$    $[-2, -5, 3, 7]$



- [27] The image of point  $(-1, 2)$  by translation 3 unit positive of x-axis  $[(2, 2), (-1, 5)]$
- [28]  $5 + -5 = 0$  is called --- property [Commutative, associative, additive identity]
- [29]  $7 = |a|$ , then  $a = [-7, 0, 7, \pm 7]$
- [30]  $\mathbb{Z}^+ - \mathbb{Z}^- = \mathbb{N}$  ---  $[\mathbb{Z}^+, \mathbb{Z}^-, \{0\}, \mathbb{C}]$
- [31] The set of non negative integers numbers =  $[\mathbb{Z}^+, \mathbb{Z}^-, \mathbb{N}, \mathbb{Z}]$
- [32]  $a \div b = 1$ , then  $b = [0, 1, a, -a]$
- [33] if  $A(3, 1)$ ,  $B(-3, 1)$ , then  $AB =$  --- units  $[9, -6, 6, 2]$
- [34] The image of The point  $(1, -3)$  by translation  $(-1, 3)$  is  $(1, 0) [(0, 3), (0, 0)]$
- [35]  $|5| - 1 - 5| =$  ---  $[0, 5, 10, 15]$
- [36] if  $x + y = \text{zero}$ , then  $xy$  --- Zero  $[=, >, <, =]$
- [37] The image  $(3, -2)$  by translation  $(4, 2)$  is  $((7, 0), (-7, 0), (-1, 4))$
- [38]  $|-2| + |6| = [12, 2, -2, 8]$
- [39]  $[8 + (-3)] \times (-3) = [-15, -4, 15, 0]$
- [40] The Image of point  $(2, -1)$  by translation 3 unit positive y-axis  $[(2, 2), (5, -1)]$
- [41] If  $A'(3, -3)$  is image of A by translation  $(x-1, y-4)$ , Point A is  $[(4, 1), (-4, -1)]$
- [42] if  $A(6, 1)$ ,  $B(6, 4)$ , then the length of line segment  $AB$   $[-4, 4, 5, 3]$
- [43] The set of odd integers  $\cup$  The set of even integers =  $[\mathbb{Z}, \mathbb{N}, \mathbb{P}, \mathbb{O}]$
- [44] if  $x \in \{2, -3\} \cap \{5, -3\}$ , then  $x = [\{2\}, \{-3\}, \{-5\}, \{5\}]$
- [45]  $-7 \square -19$   $[>, <, =]$   $(-4) \square -14$   $[>, <, =]$
- [46]  $0 +$  --- =  $|-7|$   $[0, 7, -7, 70]$
- [47] if  $a + b = b$ , then  $a =$  ---  $[a, b, 0, 1]$
- [48]  $-(-12) \times |-5| = [-60, 60, 17, -17]$
- [49] The quotient of two integers having different signs [Positive, negative, 0]
- [50] if  $a \times b = a$ , then  $b =$  ---  $[a, b, 0, 1]$
- [51]  $6 \div 3 \times 2 - 1 =$  ---  $[1, 2, 3, 4]$
- [52] if  $n$  is negative integer, which of The following smallest  $[3+n, 3n, \frac{-3}{n}]$